STEEL HECTOR & DAVIS

REGISTERED LIMITED LIABILITY PARTNERSHIP

ORIGINAL

Steel Hector & Davis LLP
215 South Monroe, Suite 601
Tallahassee, Florida 32301-1804
850.222.2300
850.222.8410 Fax
www.steelhector.com

Charles A. Guyton
850.222.3423

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July 16, 2002

-VIA HAND DELIVERY-

Ms. Blanca S. Bayó
Division of the Commission Clerk
and Administrative Services
Florida Public Service Commission
2540 Shumard Oak Blvd.
Tallahassee, FL 32399-0850

Re: Docket Nos. 020262-EI and 020263-EI

Dear Ms. Bayó:

On March 22, 2002, Florida Power & Light Company ("FPL") filed a Petition for Determination of Need for an Electrical Power Plant - Martin Unit 8 and a Petition for Determination of Need for an Electrical Power Plant - Manatee Unit 3. FPL's two petitions were assigned Docket Nos. 020262-EI and 020263-EI, respectively.

On April 22, 2002, FPL moved to hold both proceedings in abeyance to allow FPL to undertake a Supplemental Request for Proposals (Supplemental RFP). On April 29, 2002, FPL filed an emergency motion for waiver of Rule 25-22.080(2), F.A.C., to allow deferral of the hearing schedule if, as a result of the Supplemental RFP, Martin Unit 8 and Manatee Unit 3 were determined to be the most cost-effective alternatives to meet FPL's 2005 and 2006 need. By Order No. PSC-02-0571-PCO-EI, Commissioner Deason, acting as prehearing officer, substantially granted FPL's emergency motion to hold both proceedings in abeyance, and by Order No. PSC-02-0703-PCO-EI, the Commission granted FPL's emergency waiver of Rule 25-22.080(2).

AUS
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CMP 1
COM 5 + org last
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OPC
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SEC 1
OTH 1 to each file

FPL has completed its Supplemental RFP. FPL's analysis shows that Martin Unit 8 and Manatee Unit 3 are the most cost-effective options to meet FPL's 2005 and 2006 need for capacity. Consequently, FPL is now prepared, consistent with Order Nos. PSC-02-0571-PCO-EI

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and PSC-02-0703-PCO-EI, for the Commission to proceed with its evaluation of the need for those two units in Docket Nos. 020262-EI and 020263-EI. The documents enclosed herewith, as described below, provide the information required for that evaluation.

Enclosed for filing on behalf of FPL in Docket Nos. 020262-EI and 020263-EI are the original and fifteen copies of:

(1) FPL's Motion for Leave to Amend Petitions for Determination of Need

(2) FPL's Amended Petition for Determination of Need for an Electrical Power Plant-Martin Unit 8

(3) FPL's Amended Petition for Determination of Need for an Electrical Power Plant-Manatee Unit 3

Because the same analysis supported FPL's assessment of its 2005 and 2006 capacity needs and its determination that Martin Unit 8 and Manatee Unit 3 were the most cost-effective alternatives to meet the needs, FPL previously filed a motion to consolidate both dockets. Consistent with its motion to consolidate, FPL filed along with its original Need Determination petitions a single Need Study for Electrical Power Plant and a single set of Need Study Appendices, as well as a common set of testimony for both dockets. FPL continues to seek consolidation of these dockets for hearing.

In support of its amended Petitions for Determination of Need for Martin Unit 8 and Manatee Unit 3, FPL is filing the original and 15 copies of the following documents:

(1) Need Study For Electrical Power Plant, 2005-2006

(2) Need Study Appendices A - D

(3) Need Study Appendices E - J

(4) Need Study Appendices K - O

(5) Direct Testimony of Dr. William E. Avera

(6) Direct Testimony of C. Dennis Brandt

(7) Direct Testimony of Moray P. Dewhurst

(8) Direct Testimony of Leonardo E. Green

(9) Direct Testimony of Rene Silva

(10) Direct Testimony of Dr. Steven R. Sim

(11) Direct Testimony of Donald R. Stillwagon

(12) Direct Testimony of Alan S. Taylor

(13) Direct Testimony of William L. Yeager

(14) Direct Testimony of Gerard Yupp

These documents reflect the results of FPL's Supplemental RFP and supercede the Need Study and Appendices and its Direct Testimony filed on March 22, 2002, in support of its initial Petitions for Determination of Need. Therefore, FPL hereby withdraws the March 22 Need Study and Appendices and the March 22 Direct Testimony.

Copies of the enclosed documents, are being provided to counsel for all parties of record. Under separate cover letter, FPL is filing its confidential appendices to the Need Study and a Request for Confidential Classification for the confidential appendices.

With the interruption of these proceedings for the Supplemental RFP, it is important that FPL's need determination proceedings be heard expeditiously. Prior to the Commission's granting of FPL's Emergency Motion To Hold The Proceedings In Abeyance, the parties had agreed to a schedule that would result in a hearing on October 2-4, 2002, a Commission decision on November 19, 2002, and a final order no later than December 4, 2002. FPL needs to preserve this schedule in order to meet its scheduled in-service date of June 2005 for both Martin Unit 8 and Manatee Unit 3. To facilitate this schedule, FPL has: (a) included more detailed data in the enclosed Need Study and Appendices than is required by Commission rule; (b) filed its direct testimony along with its amended petitions; (c) worked out with the intervenors free access to the primary analytical tools used in conducting the economic analysis of the Supplemental RFP; (d) agreed to a Confidentiality Agreement and process to allow intervenor access to most confidential data; and (e) agreed to expedited discovery. FPL will continue to work with the Commission and the parties to facilitate the Commission's prompt consideration of these proceedings.

Any delay in these proceedings would place at risk the in-service dates of Martin Unit 8 and Manatee Unit 3. In the event of delay, FPL would not achieve its 20 percent reserve margin criteria (or even a 15 percent reserve margin) in the summer of 2005. Without purchases of capacity to replace these facilities, an option which may not be available for the full capacity of these units, the reliability of FPL's system could be significantly adversely impacted to the detriment of FPL's customers. In the event of a delay, if FPL were to attempt to purchase capacity and energy to replace these units, FPL likely would pay higher costs than the costs it would incur if these units had met their in-service dates. Thus, delay also would adversely impact the costs paid by FPL's customers.

Because a delay would cause adverse impacts upon FPL's customers, FPL respectfully requests that these proceedings be processed according to the previously agreed schedule and that an Order on Procedure be issued. Such an order should place reasonable limits on discovery, encourage intervenors to coordinate discovery as they have previously agreed to do,

expedite discovery as previously agreed and set forth the agreed-to schedule, thereby facilitating the administration of these proceedings.

Respectfully submitted,

Charles A Guyton

R. Wade Litchfield
Charles A. Guyton

Attorneys for Florida Power
& Light Company

CAG/gc
Enclosures

cc: Counsel for Parties of Record

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BEFORE THE FLORIDA
PUBLIC SERVICE COMMISSION

DOCKET NOS. 020262-EI, 020263-EI
FLORIDA POWER & LIGHT COMPANY

JULY 16, 2002

IN RE: PETITION FOR DETERMINATION OF NEED FOR PROPOSED ELECTRICAL POWER PLANT IN MARTIN COUNTY OF FLORIDA POWER & LIGHT COMPANY

IN RE: PETITION FOR DETERMINATION OF NEED FOR PROPOSED ELECTRICAL POWER PLANT IN MANATEE COUNTY OF FLORIDA POWER & LIGHT COMPANY

DIRECT TESTIMONY & EXHIBITS OF:

WILLIAM E. AVERA

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

FLORIDA POWER & LIGHT COMPANY

DIRECT TESTIMONY OF WILLIAM E. AVERA

DOCKET NOS. 020262-EI, 020263-EI

JULY 16, 2002

Q. Please state your name and business address.

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

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

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

Q. Describe your educational background, professional qualifications, and prior 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 Ph.D. program in economics at the University of North Carolina at Chapel Hill. Upon graduation, 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,

Inc. in New York City as Manager of Financial Education, a position in which I had responsibility for all corporate education programs in finance, accounting, and economics.

In 1977 I joined the staff of the Public Utility Commission of Texas (PUCT) as Director of the Economic Research Division. During my tenure at the PUCT, I managed a division responsible for financial analysis, cost allocation and rate design, economic and financial research, and data processing systems, and I testified in a number of cases on a variety of financial and economic issues. Since leaving the PUCT in 1979, I have been engaged as a consultant. I have participated in a wide range of analytical assignments involving utility-related matters on behalf of utilities, industrial customers, municipalities, and regulatory commissions. I have testified before the Federal Energy Regulatory Commission (FERC), as well as the Federal Communications Commission (FCC), 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 28 states.

With the approval of then–Governor George W. Bush, 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. Currently, I am serving 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 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 was elected Vice Chairman of the National Association of Regulatory Commissioners (NARUC) Subcommittee on Economics and appointed to NARUC's Technical Subcommittee on the National Energy Act. I have also served as an officer of various other professional organizations and societies. A resume containing the details of my experience and qualifications is attached as Document WEA-2.

Q. What is the purpose of your testimony?

A. As a result of the comprehensive review of Florida Power & Light Company's

(FPL or the Company) capacity alternatives described in the Need Study, FPL recently completed a solicitation for competitive power supplies in order to identify the most cost-effective alternatives for new resources. My firm was retained to consult with FPL regarding financial issues related to the solicitation. The purpose of my testimony is to examine the impact of power purchase contracts on FPL's financial position and present to the Florida Public Service Commission (FPSC or the Commission) the method FPL used to account for these impacts in its economic evaluation of capacity alternatives submitted in response to its Supplemental Request for Proposals (Supplemental RFP).

Q. Please summarize the basis for your conclusions concerning the issues on which you are testifying in this hearing.

A. To prepare my testimony, I used information from a variety of sources that would normally be relied on by a person in my capacity. I am familiar with the organization, finances, and operations of FPL through the pre-filed testimony that I prepared previously on behalf of the Company in conjunction with the FPSC's recent review of FPL's rates (Docket No. 001148-EI). I also reviewed information relating specifically to my opinions in this proceeding, including bond rating agency reports, and prior regulatory proceedings and orders, and articles in the trade press. These sources, coupled with my experience in the fields of finance and utility regulation, have given me a working knowledge of FPL and are the basis for my conclusions.

Q. What are your conclusions regarding the impact of purchased power contracts on FPL's financial position?

A. Investors regard purchased power contracts as off-balance-sheet obligations that increase the financial leverage of the purchaser. To maintain bond ratings and financial flexibility, utilities must offset purchased power obligations with increased equity. This equity requirement has been recognized in past orders of the Commission and bond rating agency reports for FPL. Consideration of the cost of additional equity required when FPL increases its purchased power commitments is consistent with FPSC orders and the treatment afforded these obligations by the major rating agencies. FPL's equity penalty calculation correctly accomplishes this adjustment.

Q. What portion of FPL's power requirements are met through long-term purchased power contracts?

A. With a summer 2002 combined capacity of approximately 21,140 megawatts (MW), FPL's system capacity consists of 17,860 MW from company-owned facilities and approximately 3,280 MW through firm purchased power contracts. Take-or-pay purchased power contracts with the Jacksonville Electric Authority and with subsidiaries of The Southern Company provide approximately 1,310 MW of power through mid-2010 and 382 MW thereafter through 2021. FPL also has various firm contracts to purchase approximately 900 MW of capacity and energy from certain cogenerators and qualifying facilities. Expiration dates on these agreements range from 2002 through

2026. In addition, during 2001 FPL entered into agreements with several other electricity suppliers to purchase an aggregate of up to approximately 1,300 MW of power with expiration dates ranging from 2003 through 2007. FPL's purchased power resources represent approximately 16 percent of FPL's total capacity resources for 2002.

Q. How do these long-term purchased power commitments impact FPL's financial position?

A. While purchased power resource strategies do not involve direct capital investment, they nonetheless have financial implications that must be considered to allow for a meaningful comparison between supply alternatives. When a utility contracts for firm, long-term purchased power, the associated fixed cost components imply additional financial risks. FPL's existing power purchase agreements, as well as those proposals submitted in response to its Supplemental RFP, also obligate the Company to make certain capacity and minimum contractual payments. These relatively greater fixed charges associated with purchased power contracts are akin to those associated with other financial obligations, such as long-term debt. As a result, these commitments are equivalent to an off-balance sheet liability, and incorporating the debt equivalent of obligations under purchased power contracts would have the effect of increasing financial leverage.

Q. Have these attributes of purchased power been recognized by the financial community?

A. Yes. The implications of purchased power commitments for a utility's financial risks have been repeatedly cited by major bond rating agencies. As early as 1992 Standard & Poor's Corporation (S&P) observed in a ratings report for FPL that "a utility incurs certain risks when entering into a long-term contract with fixed-cost capacity component" (*CreditWeek*, April 6, 1992). As S&P observed in "Buy Versus Build Debate Revisited" (*CreditWeek*, May 24, 1993):

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

S&P's assessment of purchased power obligations is analogous to investors' views of other industries that rely on off balance sheet financing, such as airlines.

Moody's Investors Service (Moody's) has also recognized the risk impact of purchased power [*Electric Utility Week*, October 8, 1990]:

Analysts Thomas Marshella and Julia Doetsch noted that a "presumed" benefit to a utility in contracting to buy power rather than build its own plant "is the apparent avoidance of the detrimental balance sheet and fixed-charge coverage impact that would have resulted had the new capacity been utility built and debt financed." Moody's questioned the "generally accepted accounting practices that usually treat purchased power commitments as off-balance-sheet liabilities. "Clearly, construction risk is often reduced, however, significant operating, financial, and regulatory risks may remain and outweigh perceived benefits," they continued, adding that the commitments typically erode a utility's financial flexibility.

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

Q. Is it appropriate to consider these financial implications in an economic evaluation of power supply alternatives?

A. Yes. In order to conduct a meaningful economic comparison between buying

power and self-build options, it is necessary to recognize the financial risks associated with power purchase contracts. Otherwise, the analyses will not reflect the true cost of entering into purchased power agreements and any comparison of the economics between alternative proposals will be flawed. S&P noted that "[u]tilities need to take these 'financial externalities' into account so that buy and build options are evaluated on a level playing field" (*CreditWeek*, May 24, 1993) and emphasized the importance of reflecting the financial realities associated with purchased power commitments in any economic analyses of competitive options (*CreditWeek*, November 1991):

> ...there are indeed benefits to purchasing power, but there are also risks that are too often overlooked. Only by thoroughly examining the risks – as well as the benefits – can a utility choose correctly.

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

A. Because investors perceive additional financial risks with obligations under purchased power contracts, as reliance on these sources increases, the utility must offset the associated debt equivalent by incorporating a higher equity component in the capital structure or through higher returns on equity. As S&P has recognized, because of purchased power, it has been necessary for FPL to maintain a relatively greater proportion of equity capital in order to

maintain its credit standing. In a December 3, 1998 report in RatingsDirect, S&P noted that:

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

Absent financial policies that recognize the leverage implicit in purchased power contracts, the associated investment risks would place downward pressure on utilities' creditworthiness and debt ratings and the greater leverage implied by a lower common equity ratio would increase investors' required rate of return for both debt and equity securities.

Apart from the immediate impact the debt-equivalent portion of purchased power costs has on the utility's financial risk, heavy fixed charges also reduce ongoing financial flexibility and the utility may face other uncertainties, such as potential replacement power costs in the event of supply disruption. Moreover, these risks are magnified as the utility's reliance on purchased power increases. Considering that the 1,700 MW increase in purchased power contemplated under FPL's Supplemental RFP would constitute a greater than 60 percent increase in the Company's firm purchased power capacity,

investors' focus on the financial ramifications and other uncertainties of purchased power would undoubtedly intensify.

Q. Has the financial impact of purchased power been previously recognized by the FPSC?

A. Yes. For example, in connection with Florida Power Corporation's (FPC) petition for approval to construct the Hines Unit 2 power plant, FPC incorporated an adjustment to recognize the debt equivalent associated with purchase alternatives. The FPSC agreed, noting in Order No. PSC-01-0029-FOF-EI (January 5, 2001) that:

> We find that for long-term debt, we should allow some consideration of imputed debt. Imputed debt is an actual consideration by bond rating agencies. We note that we have allowed limited consideration of imputed debt in past cases.

Indeed, in Docket No. 990249-EG, Standard Offer Contract for Florida Power & Light Company, the FPSC concluded that "[w]e find it is appropriate to include an equity adjustment when determining FPL's proposed standard offer contract payments" (Order No. PSC-99-1713-TRF-EG, p. 7, September 2, 1999). While the Commission chose not to address the broader policy issue of who should bear the incremental cost of additional equity to compensate for purchased power contracts, the FPSC recognized (*Ibid.* at p. 7-8) that:

> Buying power increases the utility's fixed charges, which, in turn, can reduce financial flexibility. Standard & Poor's (S&P) notes that, "regardless of whether a utility buys or builds, adding capacity means incurring risk." ... In including this equity adjustment, FPL is reflecting the cost, in the form of less financial flexibility, that is imposed on electric utilities with purchased power contracts.

Rule 25-22.081(7), F.A.C., relating to the contents of a petition for determination of need, also requires the utility to consider the implications of purchased power on its financial position:

> If the generation addition is the result of a purchased power agreement between an investor-owned utility and a nonutility generator, the petition shall include a discussion of the potential for increases or decreases in the utility's cost of capital, the effect of the seller's financing arrangements on the utility's system reliability, any competitive advantage the financing arrangements may give the seller and the seller's fuel supply adequacy.

Since 1999, the FPSC has recognized the financial leverage implicit in purchased power contracts in the approach used for surveillance reporting

requirements. The current Revenue Sharing Agreement in effect for FPL included in Order No. PSC-02-0501-AS-EI, April 11, 2002, incorporates by reference the following provision from the Stipulation and Settlement approved by the Commission in 1999 (Order No. PSC-99-0519-AS-EI, March 17, 1999):

> [FPL's] adjusted equity ratio equals common equity divided by the sum of common equity, preferred equity, debt and off-balance sheet obligations. The amount used for off-balance sheet obligations will be calculated per the Standard & Poor's methodology as used in its August 1998 credit report.

Q. Would you please comment on the current level of attention given by the investment community to properly considering the financial impacts of purchased power commitments?

A. S&P noted in 1993 that purchased power can have a debilitating impact on a utility's investment risks (*CreditWeek*, May 24, 1993):

> Over the past few years, several ratings have been lowered due to purchased power obligations. In other cases, S&P did not raise ratings. Still others are lower than they might otherwise be owing to purchased power liabilities.

In light of investors' recent tribulations with Enron Corporation (Enron), the investment community is likely to be even more sensitive to the impact that off-balance sheet obligations can have on a company's financial position. As the *Wall Street Journal* reported in a recent article entitled *Rating Agencies Crack Down on Utilities* (December 19, 2001, p. C1), bond rating agencies are closely scrutinizing debt levels on power company balance sheets in the wake of Enron's collapse. Moody's reportedly launched a comprehensive review to better assess the potential impact of off-balance sheet financing, requesting detailed information from as many as 4,200 companies that the firm rates ("Moody's Trains Eye on Data Off the Sheet", The Wall Street Journal, p. A2, January 21, 2002). As a result of this intensified focus, there is a greater potential that higher financial leverage – whether on or off the balance sheet – will lead to ratings downgrades, reduced access to capital, and increased borrowing costs. The *Wall Street Journal* article went on to note the crucial role that financial flexibility plays in ensuring the utility's wherewithal to meet customers' needs:

> All the belt-tightening spells bad news for continued development of the nation's energy infrastructure. Companies that can borrow more money and stretch their dollars, quite simply, can build more plants and equipment. Companies that are increasingly dependent on equity financing – particularly in a bear market – can do less.

Q. Please describe the methodology used by S&P to reflect the financial impact of purchased power obligations.

A. While other rating agencies have expressed similar concerns regarding the financial impacts of purchased power commitments, S&P is largely unique in having a defined quantitative analysis to account for the additional risks associated with these contractual commitments. This methodology begins by quantifying the potential off-balance sheet obligation attributable to long-term power purchase contracts. The first step in this process involves calculating the net present value of the remaining capacity payments over the life of the agreement.

S&P's method also recognizes that power purchase agreements have different characteristics that impact their degree of firmness. Contracts that are relatively more firm in terms of their payment obligations would be considered more debt-like than others. Within the S&P analytical framework, this difference in the relative debt characteristics of purchase power obligations is accommodated using a risk spectrum ranging from 0 to 100 percent.

By evaluating the characteristics of a utility's purchased power contracts, S&P places each agreement on the risk spectrum according to the degree to which payments under the contract resemble the fixed obligations of traditional debt instruments, such as long-term bonds. Obligations on the lower end of the

scale would have fewer debt-like characteristics and would be considered less firm than the obligations placed at the high end of the scale. This risk factor represents the proportion of the obligations' net present value to be considered off-balance sheet debt. For example, if S&P determines that the risk factor for a specific purchased power contract is 50 percent, S&P considers 50 percent of the net present value of the related capacity payments as a debt equivalent and adds this to reported obligations. Thus, the major bond rating agencies look to the nature of the purchased power arrangement to determine the portion of this present value to consider as debt in analyzing relative financial risks.

In determining the risk factor, S&P considers a variety of qualitative factors related to the purchased power contract, including its market, operating, and regulatory risks and the extent to which they are borne by the utility. For example, S&P would view a sale/leaseback of a major generating plant as the virtual equivalent of debt (*i.e.*, risk factor of 100 percent) because of the strategic importance of the facility and the ironclad nature of the payments. Obligations under take-or-pay contracts, which are generally unconditional as to acceptance and availability of power would fall lower down the risk spectrum compared to a sale/leaseback, although unit-specific purchase contracts under a firm take-or-pay agreement may warrant a risk factor of up to 80 percent. Take-and-pay contracts that require capacity payments only if power is available would come next on the scale, with risk factors in the range

of 10 to 50 percent.

Q. Please describe the method FPL used to reflect the greater financial risks associated with purchased power in its economic evaluation of the alternative proposals.

A. In order to recognize the financial implications associated with the off-balance sheet debt attributable to purchased power contracts, FPL included an "equity penalty" in its economic evaluation of alternative proposals submitted in response to the Supplemental RFP. Consistent with the fact that investors view some portion of a utility's capacity payment obligations as the equivalent of debt on the balance sheet, FPL's quantitative analyses reflected an adjustment to incorporate the additional costs associated with the greater equity that would be required to rebalance its capital structure.

For each year under the proposal, the cumulative net present value of the remaining annual demand charges was calculated using a 7.4 percent discount rate reflective of the incremental cost of debt. This cumulative net present value was then multiplied by a risk factor of 40 percent to arrive at the debt equivalent portion of these demand charges in each year. In order to offset the greater financial leverage associated with this obligation, FPL must replace a portion of this off-balance-sheet debt with equity, calculated as the product of the debt equivalent and a 55 percent equity ratio. The incremental cost associated with this rebalancing was then computed by multiplying the

amount of capital implicitly shifted from debt to equity by the difference between the pre-tax cost of the two capital sources. Thus, the equity penalty represents the incremental costs in each year that would be required to hold FPL's financial leverage constant in the face of the higher off-balance-sheet liabilities attributable to the purchased power proposals. These annual costs were then converted to a present value using an 8.5 percent discount rate, computed as the weighted average after-tax cost of debt and equity.

An illustration of the method described above is contained in Document WEA-1, assuming annual fixed capacity charges of $1,000 over a five-year horizon. As shown there, the first step is to compute the cumulative net present value of the capacity charges remaining in each year using the 7.4 percent debt cost rate. Step 2 converts these cumulative balances to an annual debt equivalent by applying the 40 percent risk factor. In Step 3, the debt equivalent in each year is multiplied by the 55 percent equity ratio to determine the amount of capital rebalanced from debt to equity as a result of the purchased power agreement. The annual equity penalty is calculated in Step 4 by multiplying the rebalanced equity by the 11.6 percent differential between the pre-tax costs of debt and equity. These annual amounts were then discounted at 8.5 percent (the after-tax cost of capital) to arrive at the $252 net present value of the equity penalty.

Q. Is the methodology underlying the equity penalty calculation consistent with the approach adopted by S&P and in prior FPSC proceedings?

A. Yes. The equity penalty calculation employed by FPL is directly analogous to the methodology used by S&P in its analyses of FPL's credit standing. While there are distinctions between the details of the calculations due to differences between generic assumptions and FPL specific data, the underlying approach used to develop the debt equivalent portion of the purchase power obligations is the same. S&P's focus is primarily on balance sheet adjustments designed to recognize the credit implications of heightened financial risks associated with purchased power, while FPL's analyses quantifies the implicit costs of rebalancing between debt and equity to offset these risks. Nevertheless, the methodology used by FPL is consistent with S&P's approach. Likewise, the methodology FPL used to make the equity penalty calculations is the same as that approved by the FPSC in Order Nos. PSC-01-0029-FOF-EI and PSC-99-1713-TRF-EG discussed earlier.

Q. What was the source of the risk factor that FPL assigned to the purchased power proposals?

A. As noted earlier, FPL's analyses of the financial impact of purchased power proposals incorporated a risk factor of 40 percent, indicating the portion of the total net present value of annual capacity charges considered equivalent to debt. This value was based on the bottom of the 40 to 60 percent risk factor range determined independently by S&P based on the rating agency's review

and analyses of the specific terms contemplated in FPL's RFP. As S&P concluded in reporting the results of its review:

> We evaluated the RFP for purchased power and determined that between 40-60% of the capacity payments would be added to FPL's debt. While this contract is take and pay based on performance, the RFP states that minimal level of performance will be required. This provision increases the likelihood that the payments will be made, making the capacity payment more firm or "debt" like.

This 40 percent risk factor is also identical to that used by FPC to calculate the equity penalty in its economic evaluation of purchased power alternatives to the Hines Unit 2 (Docket No. 001064-EI, Corrected Testimony of John B. Crisp at p. 14).

Q. What capital structure and component costs of debt and equity did FPL assume in calculating the equity penalty?

A. The equity penalty was developed by rebalancing the capital structure to maintain a 55 percent equity ratio. In computing the associated costs implicit in this rebalancing, the equity penalty assumed a rate of return on common equity of 11.7 percent and a debt cost of 7.4 percent.

Q. Do you believe these assumptions are reasonable for purposes of an economic evaluation of purchased power alternatives?

A. Yes. The 55 percent common equity ratio incorporated in calculating the equity penalty is consistent with FPL's adjusted 13-month average capital structure for 2001 and 2002, as presented in my prefiled direct testimony before the FPSC in the recent review of the Company's Minimum Filing Requirements (Docket No. 001148-EI). Further, the current Revenue Sharing Agreement arising from the stipulation in that proceeding retained the adjusted capital structure for surveillance reporting requirements specified under the terms of the prior agreement that expired in April 2002. This prior agreement also embodied a 55.83 percent surveillance cap on the common equity ratio.

With respect to the component costs of debt and equity, a 7.4 percent incremental cost of debt is generally consistent with the current yields on public utility bonds. Meanwhile, under the terms of the current Revenue Sharing Agreement, FPL no longer has a benchmark authorized return on equity range for the purpose of addressing earnings levels. Nevertheless, the 11.7 percent cost of equity is generally consistent with other authorized rates of return in Florida, especially when considering the relatively greater risks faced by FPL. Since the 11.7 percent cost of equity rate falls considerably below the required rate of return I estimated for FPL in Docket No. 001148-EI, it almost certainly results in a conservative estimate of the equity penalty

associated with the financial obligations inherent in purchased power contracts.

Q. Does the equity penalty calculation incorporate any adjustment to reflect the relative credit quality of the individual counterparties?

A. No. The terms of FPL's Supplemental RFP explicitly contemplated that counterparties would maintain an investment grade bond rating or an equivalent guarantee. Accordingly, in conducting the analyses used to quantify the equity penalty, no adjustments were made to incorporate project sponsor risk differences. Nonetheless, the financial wherewithal of the counterparty may impact the risks faced by FPL, especially in extreme instances. As S&P observed [*CreditWeek*, November 1991]:

> [H]ighly leveraged NUGs are inherently less creditworthy than less leveraged NUGs. And their financial health may affect their reliability.

The risk spectrum used to calculate the equity penalty reflects the relative debt characteristics of the off-balance sheet liability associated with the terms of a purchased power contract. As such, it is distinct from any assessment of the financial viability of a specific counterparty or that entity's ability to actually meet the provisions of the agreement.

Q. Does this conclude your direct testimony in this case?

A. Yes, it does.

ILLUSTRATION OF EQUITY PENALTY CALCULATION

	Year	Annual Capacity Charges	NPV Factor at 7.4%	Annual NPV Capacity Charges	Cumulative NPV
	1	$1,000	0.9311	$931	$4,057
	2	$1,000	0.8669	$867	$3,126
STEP 1	3	$1,000	0.8072	$807	$2,259
	4	$1,000	0.7516	$752	$1,451
	5	$1,000	0.6998	$700	$700

	Year	Cumulative NPV	Risk Factor	Debt Equivalence
	1	$4,057	40%	$1,623
	2	$3,126	40%	$1,250
STEP 2	3	$2,259	40%	$903
	4	$1,451	40%	$581
	5	$700	40%	$280

	Year	Debt Equivalence	Equity Ratio	Equity to Rebalance
	1	$1,623	55%	$892
	2	$1,250	55%	$688
STEP 3	3	$903	55%	$497
	4	$581	55%	$319
	5	$280	55%	$154

	Year	Equity to Rebalance	Equity-Debt Cost Difference	Equity Penalty	NPV Factor at 8.5%	NPV Capacity Charges
	1	$892	11.6%	$104	0.9217	$95
	2	$688	11.6%	$80	0.8495	$68
STEP 4	3	$497	11.6%	$58	0.7829	$45
	4	$319	11.6%	$37	0.7216	$27
	5	$154	11.6%	$18	0.6650	$12
					NPV =	**$247**

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, regulatory agencies, alternative dispute resolution panels, and legislative committees throughout the U.S. and Canada. Testimony on economic and financial issues, including antitrust, damages, cost of capital, and business valuation. Lectured in executive education programs around the world; undergraduate and graduate teaching in business and economics; leadership positions in government, industry, academia, and the military.

Employment

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

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

Education

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

Professional Associations

Received Chartered Financial Analyst (CFA) designation in 1977.

Former Professional Association Positions: 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, Subcommittee on Economics and National Association of Regulatory Utility Commissioners (NARUC) Appointed to NARUC's Technical Subcommittee on the National Energy Act.

Teaching in Executive Education Programs

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

Business- and Government-Sponsored Programs: Advanced Seminar on Earnings Regulation, American Public Welfare Association, Association for Investment Management and Research, Congressional Fellows Program, Cost of Capital Workshop, Electricity Consumers Resource Council, Financial Analysts Association of Indonesia, Financial Analysts Review at Albuquerque, Denver, Raleigh and Salt Lake City, 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, 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, and major corporations.

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

Expert Witness Testimony

Testimony before administrative agencies addressed cost of capital, rate design, and other economic and financial issues.

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

State Regulatory Agencies: Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Hawaii, Idaho, Illinois, Indiana, Kansas, Maryland, Missouri, Nevada, New Mexico, North Carolina, Ohio, Oklahoma, Pennsylvania, South Carolina, Texas, Virginia, Washington, West Virginia, and Wisconsin.

Testimony before federal and state courts, arbitration panels, and alternative dispute resolutions involving damages, valuation, antitrust liability, fiduciary duties, and other economic and financial issues.

Other Professional Activities

Board Member, Georgia System Operations Corporation (electric system operator for Oglethorpe Power Corporation) Co-chair, Synchronous Interconnection Committee, appointed by Governor George Bush and Public Utility Commission of Texas Appointed to Organic Livestock Advisory Committee by Texas Agricultural Commissioner Susan Combs Appointed to research team for

Texas Railroad Commission study, *The UP/SP Merger: An Assessment of the Impacts on the State of Texas* Member of team appointed by Hawaii Public Utilities Commission to review affiliate relationships of Hawaiian Electric Industries 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.

Community Activities

Board Member, Sustainable Food Center Chairman, Energy Task Force, Greater Austin-San Antonio Corridor Council Chair, Board of Deacons, Finance Committee, and Elder, Central Presbyterian Church of Austin Founding Director, Orange-Chatham County Legal Aid.

Military

Captain, U.S. Naval Reserve (retired after 28 years service) Commanding Officer, Naval Special Warfare (SEAL) Engineering Support Unit Officer-in-charge of SWIFT patrol boat in Vietnam Enlisted service as weather analyst.

Bibliography

Monographs

Ethics and the Investment Professional (video, workbook, and instructor's guide) and *Ethics: Challenge Today* (video), Association for Investment Management and Research (AIMR) (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*, AIMR (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," in *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. Latane 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

"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. Latane in *Proceedings of the Eastern Finance Association* (1973).

Book reviews in *Journal of Finance* and *Financial Review*. Abstracts for *C.F.A. Digest*. Series of articles in *Carolina Financial Times*.

Selected Papers and Presentations

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

"Ethics," Sponsored by Canadian Council of Financial Analysts 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, Iowa (December 1995). Similar presentations given to National G & T Conference, Irving, Texas (June 1995), Kentucky Association of Electric Cooperatives Annual Meeting, Louisville, Kentucky (Nov. 1994), Virginia, Maryland, and Delaware Association of Electric Cooperatives Annual Meeting, Richmond, Virginia (July 1994), and Carolina Electric Cooperatives Annual Meeting, Raleigh, North Carolina (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, Texas (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).

"Good Ethics is Good Business," Austin Society of Financial Analysts (March 1994). Similar presentations given to San Antonio Society of Financial Analysts (Nov. 1985) and St. Louis Society of Financial Analysts (Feb. 1986).

"Regulatory Developments in Telecommunications," Regional Holding Company Financial and Accounting Conference, San Antonio, Texas (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, Texas (Jun. 1991).

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

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

"The Regulators' Perspective," Bellcore Economic Analysis Conference, San Antonio, Texas (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, Georgia (Sep. 1985).

"Wheeling for Power Sales," Energy Bureau Cogeneration Conference, Houston, Texas (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, Louisiana (Nov. 1982).

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

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

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

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

"The Relative Value of Statistics of Ex Post Common Stock Distributions to Explain Variance," with Charles G. Martin, Southern Finance Association, Atlanta, Georgia (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, Canada (Oct. 1976).

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

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

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

"Multiperiod Wealth Distributions and Portfolio Theory," Southern Finance Association, Houston, Texas (Nov. 1973).

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