KEN PRUITT
President of the Senate

MARCO RUBIO
Speaker of the House of Representatives

STATE OF FLORIDA
OFFICE OF PUBLIC COUNSEL

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Charlie Beck
Interim Public Counsel

October 1, 2007

Ms. Ann Cole, Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0870

RE: Docket No. 070001-EI
In re: Fuel and Purchased Power Cost Recovery Clause with Generating Performance Incentive Factor

Dear Ms. Cole:

Enclosed, for filing, on behalf of the Citizens of the State of Florida, is the original and 15 copies of the Testimony of Aaron L. Rothschild.

Please indicate the time and date of receipt on the enclosed duplicate of this letter and return it to our office.

CMP ____
COM 5
CTR ____
ECR ____
GCL 2
OPC ____
RCA 1
SCR ____
SGA ____
SEC ____
OTH ____

Sincerely,

Stephen C. Burgess
Associate Public Counsel

Enclosures
SCB:ppg
cc: Parties of Record

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the Office of Public Counsel's Testimony of Aaron L. Rothschild has been furnished by electronic mail and U.S. Mail on this 1st day of October, 2007, to the following:

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Stephen C. Burgess
Associate Public Counsel

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Fuel and Purchased Power Cost Recovery Clause with Generating Performance Incentive Factor
_____/

DOCKET NO. 070001-EI

FILED: October 1, 2007

DIRECT TESTIMONY OF

AARON L. ROTHSCHILD

ON BEHALF OF

THE OFFICE OF PUBLIC COUNSEL

Respectfully submitted,

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Interim Public Counsel

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Attorney for the Citizens
of the State of Florida

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 070001-EI

PREFILED

TESTIMONY

OF

AARON L. ROTHSCHILD

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND ADDRESS

A. My name is Aaron L. Rothschild and my address is 15 Lake Road, Ridgefield, CT 06877.

Q. ON WHOSE BEHALF ARE YOU SUBMITTING TESTIMONY?

A: State of Florida's Office of Public Council (OPC).

Q. WHAT IS YOUR OCCUPATION?

A. I am a financial consultant specializing in cost of capital.

Q. BY WHAT COMPANIES HAVE YOU BEEN EMPLOYED?

A. Since 2002, I have been a partner of Rothschild Financial Consulting. Starting in 1996 I was employed by the telephone and data company Metropolitan Fiber Systems (MFS) in Chicago where my responsibilities included strategic planning and business development. Through acquisition of MFS, I joined WorldCom in 1998 where I was the director of business development. Initially my work for WorldCom was in the United States. Then, I was transferred to Hong Kong, followed by a transfer to Tokyo, Japan. I was also director of

business planning for undersea cable company 360 Networks, in Hong Kong and was an investment analyst for Chapman Spira, an investment-banking firm on Wall Street.

Q. PLEASE SUMMARIZE YOUR UTILITY REGULATORY EXPERIENCE.

A. Within the past year, I have testified in two utility rate cases on behalf of the Office of Consumer Counsel in Connecticut and have been engaged to testify in an electric proceeding on behalf of the Office of Public Counsel in Florida. Over the last five years, I have assisted in the preparation of approximately 30 cost of capital testimonies related to the regulation of electric, gas, telephone and water.

Q. WHAT IS YOUR EDUCATIONAL BACKGROUND?

A. I received an MBA in Finance from Vanderbilt University in 1996 and a BA in Mathematics from Clark University in 1994.

II. SUMMARY OF CONCLUSIONS

Q. PLEASE SUMMARIZE YOUR TESTIMONY

A. I recommend that Florida Power and Light ("FPL") not be reimbursed for their increased purchase power of $6,163,000 due to the outage of the Turkey Point Unit 3. This outage represents the realization of a risk that was part of the calculations investors made when they decided to invest in the company before the accident. A card player cannot ask for his or her money back when they lose a hand and still keep their winnings when they are dealt a good hand. The house would not allow this double standard and neither should rate payers.

According to FPL's annual report the purpose of the fuel clause is, "to reduce the risk of unexpected fuel price volatility by locking in fuel prices for a portion of FPL's fuel requirements." Item 10 of Order No. 1456 does not state its applicability to an outage.

The Hope Natural Gas case asserts that investors of regulated utilities should be given the opportunity to earn the allowed return, but not a guarantee. Reimbursing FPL in this case would constitute a guarantee.

Later in my testimony I will explain why the losses associated with the Turkey Point outage represent the realization of what is called a diversifiable risk. Financial theory supports, and empirical evidence confirms that investors do not receive compensation for this type of risk. Whether this accident was caused by management error or some form of sabotage, my recommendation is the same.

III. PURPOSE OF ITEM 10 OF ORDER NO. 14546 (FUEL CLAUSE).

Q. ARE YOU AWARE OF ITEM 10 OF ORDER NO. 14546?

A. Yes. I have read Docket No. 070052-EI regarding the petition by Progress Energy Florida, Inc. to recover costs of Crystal River Unit 3 uprate through the fuel clause. In this docket item 10 of order No. 14546 was addressed.

Q. WHAT IS YOUR UNDERSTANDING OF THE PURPOSE OF ITEM 10 OF ORDER NO. 14546?

A. My understanding of its purpose:

- To pass through volatile fuel and fuel-related costs to ratepayers
- To remove the disincentive a utility would otherwise have to invest the capital dollars needed to reduce fuel costs

Q. COULD RATEPAYERS POTENTIALLY BE DOUBLE CHARGED FOR A RETURN ON RATE BASE AND FUEL FACTOR?

A. Yes. For example, if in the process of investing in new facilities, ratepayers are charged for both a return on rate base and a fuel factor for the same facilities.

Another more abstract, nevertheless no less real, way of over charging ratepayers is to double charge them for risks that were already accounted for when rates were set. Examples of risk include both those related to the overall economy such as the possibility of a recession and the unique risk of the company. The Turkey Point Unit 3 incident is the realization of a risk to FPL is that was independent of the overall economy.

IV. HOPE NATURAL GAS CASE

Q. SHOULD INVESTORS IN UTILITY COMPANIES BE GUARANTEED A RETURN ON THEIR INVESTMENT?

A. No. This principle is a key point of the City of Cleveland vs. Hope Natural Gas U.S. Supreme Court decision. In this landmark case, the U.S Supreme Court said: "The fixing of just and reasonable rates, involves a balancing of the investor and the consumer interests. Thus we stated in the Natural Gas Pipeline Co. case that 'regulation does not insure that the business shall produce net revenues.'"

Q. WHAT RETURN SHOULD EQUITY INVESTORS OF FPL BE ALLOWED?

A. According to the Supreme Court in the Hope Natural Gas case, "...the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks."

V. RISK AND MODERN PORTFOLIO THEORY

Q. DO EQUITY INVESTORS PURCHASE MORE THAN ONE STOCK?

A. Many do. In 1952 Harry M. Markowitz published a paper entitled "Portfolio Selection" where he explained that investors seek to maximize expected return while minimizing risk. He explained that the best way to balance these two conflicting goals is to invest in a number of different securities. Markowitz's work is often referred to as the birth of "modern portfolio theory." (Sharpe, page 134)

Q. ARE THERE DIFFERENT TYPES OF RISKS THAT INVESTORS MUST BEAR TO INVEST IN A STOCK?

A. Yes. There are both diversifiable and non-diversifiable risks.

Q. WHAT TYPE OF RISK ARE INVESTORS ABLE TO RECEIVE A HIGHER RETURN FOR?

A. Only those risks that contribute to the overall risk of the portfolio. (Sharpe, 229)

Q. WHAT IS A DIVERSIFIABLE RISK?

A. A diversifiable risk is specific to a company, and not related to the overall market or the US/global economy. Some examples include: management performance, market share loss to a competitor and operational failures.

Q. CAN DIVERSIFIABLE RISK BE ELIMINATED?

A. Yes. According to the Nobel Laureate William Sharpe, he says the following in his book "Investments":

> In a portfolio, some securities will go up as a result of unexpected good news specific to the company that issued the securities (such as an unexpected discovery of a new drug by a pharmaceutical company.) Other securities will go down as a result of unexpected company-specific bad news (such as an industrial accident by a chemical company). Looking forward, approximately as many companies can be expected to have good news as bad news, leading to little anticipated net impact on the return of a 'well-diversified' portfolio. This means that as a portfolio becomes more diversified, the smaller its unique risk, and, in turn, its total risk, will be. (Sharpe, 218)

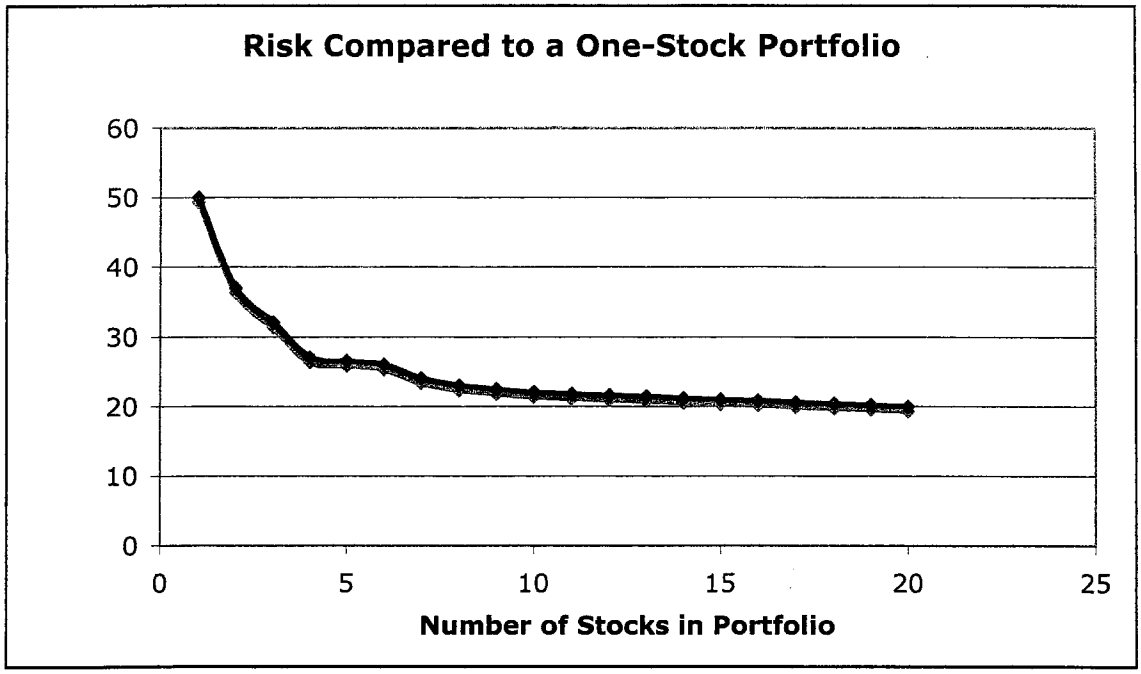
Q. WHAT IS A NON-DIVERSIFIABLE RISK?

A. A non-diversifiable risk is related to the overall market. For example, the sales volume of a car dealership in Ohio is affected if there is a recession in the United States. Business cycles, inflation, interest rates and exchange rates are some of the factors that make up the non-diversifiable risk.

The current sub prime mortgage crisis was caused, in part, because investors forgot about the concept of non-diversifiable risk. Mortgage investors have recently been painfully reminded by heavy losses that no matter how many mortgages are packaged in how many different ways there is still the overall risk of the real estate market that the packaging was incapable of eliminating through its failed attempts at diversification.

Q. HOW MANY STOCKS MUST AN INVESTOR PURCHASE IN ORDER TO ELIMINATE DIVERSIFIABLE RISK?

A. According to an article entitled "How Many Stocks Make a Diversified Portfolio" in the Journal of Finance and Quantitative Analysis it takes about 20 stocks. The graph below is an approximation of the reduction in risk that is accomplished by adding more stocks to a portfolio.



At about 20 stocks the effectiveness of diversification becomes negligible and what is left over is non-diversifiable risk.

VI. EMPIRICAL EVIDENCE

Q. WERE YOU ABLE TO SHOW THAT THE MODERN PORTFOLIO THEORY EXPLAINED ABOVE IS SUPPORTED BY THE DATA?

A. Yes. I was able to show that investors receive compensation only for non-diversifiable risk.

Q. IS THERE A WAY TO MEASURE THE NON-DIVERSIABLE RISK OF A STOCK OR PORTFOLIIO?

A. Yes. Beta is a measurement of the correlation between a given stock and the market as a whole. A portfolio made up of companies with a beta that averages 1.0 tends to have price swings that match the market in magnitude. A portfolio with an average beta of 1.5 tends to

move 1.5% for every 1% the market moves. A portfolio with average beta of 0.8 tends to move 0.8% for every 1% the market moves.

Q. WHAT GROUP OF COMPANIES DID YOU USE IN YOUR CAPM ANALYSIS?

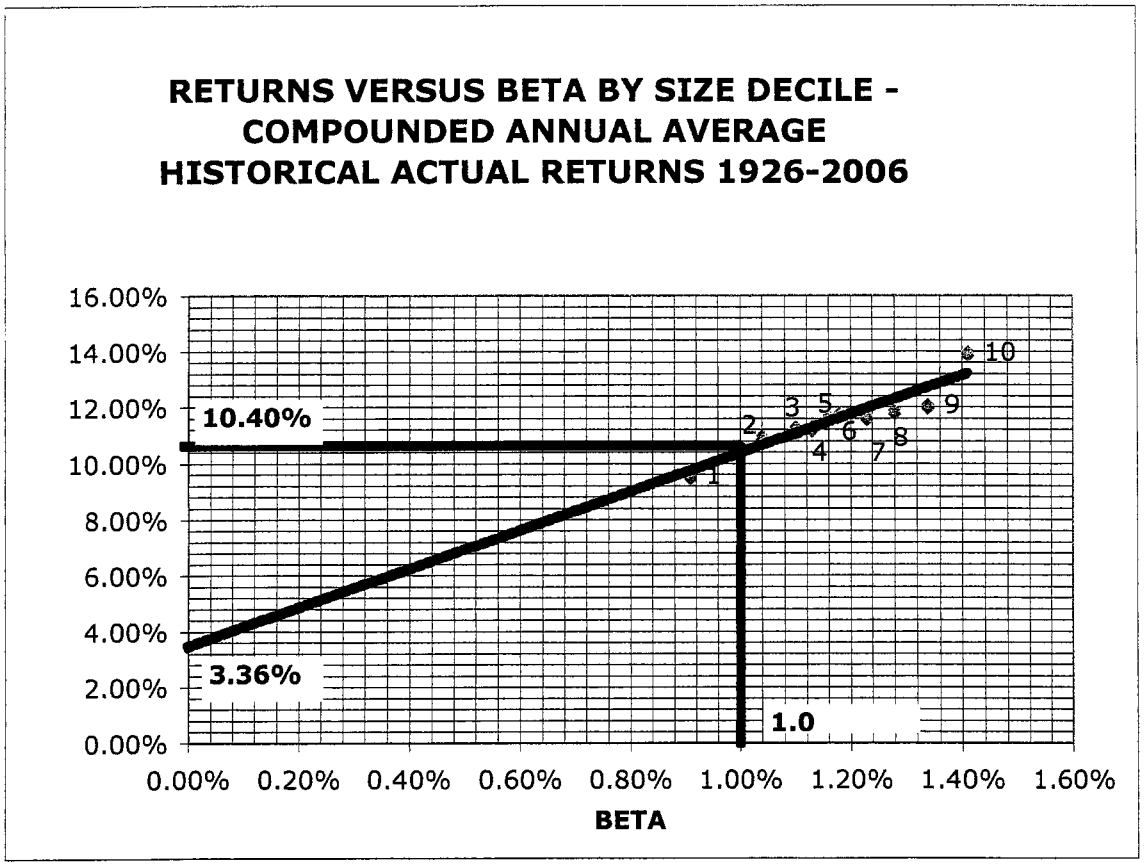
A. I relied on the Ibbotson Associates data from their 2007 Yearbook that includes 3,905 companies.

Q. HOW DID YOU DIVIDE THESE COMPANIES INTO TEN PORTFOLIOS?

A. The only data available in the Ibbotson Associates report with the companies it covers divided into separate portfolios are these ten groups that were divided by size. Since these ten groups all had significantly different betas and because the actual historical earned returns for these groups was also quantified, it was possible to use these groups to show how beta related to the actual return earned by each of these groups.

Q. WHAT IS THE RELATIONSHIP BETWEEN THE COMPOUNDED ANNUAL EARNED RETURN AND BETA FOR THE GROUP OF COMPANIES YOU SELECTED?

A. The data points in the graph below are numbered from highest to lowest beta, with number 1 being the group with the lowest beta and number 10 being the group with the highest beta. A least squared line was used to fit a line to the data points and the derived equation was used to calculate the returns for a given beta. Historically a company with a beta of 1 has earned a return of about 10.40%.



Q. DOES THE ABOVE GRAPH OF THE RELATIONSHIP BETWEEN BETA AND RETURNS HELP CONFIRM THE MODERN PORTFOLIO THEORY?

A. Yes. The compounded annual return actually achieved by investors in U.S. Treasury Bills from 1926-2006 is only 34 basis points higher than my analysis predicts. This small difference is an excellent confirmation of the integrity of the theory. The reason the risk free rate is slightly lower in my analysis is that Treasury Bills, although very close to risk free, do have a small risk associated with interest rate movement. Even short-term Treasury Bills have some, albeit very modest, risk of interest rate fluctuations and exchange rate risk for foreign investors who invest in U.S. treasuries.

Q. IS THERE ANOTHER IMPORTANT VERIFICATION?

A. Yes. Page 12 of Stocks for the Long Run by Wharton Professor, Jeremy Siegel, concludes that "... the real after-inflation, compound annual rate of return on stocks...real return on stocks... averaged 6.9 percent per year since 1926." The book also points out that this real after-inflation return on stocks has been "...extraordinarily stable... averaging 6.6 percent from 1871 through 1925..." and the book mentions that the return since World War II was 7.1 percent. Recognizing that the return data prior to 1926 contains many fewer companies and is in a much less mature economy than the data since 1926, I will concentrate on the inflation premium data after 1926 and will therefore conclude that the equity premium in excess of inflation for the average common stock in the U.S. is 7.1%. Adding the current inflation expectation derived from the bond market of 2.53% results in a cost of equity estimate of 9.54% for a company of average risk. This result is virtually identical to the 9.76% estimate made by Ibbotson Associates, within range of my 10.4% return for a stock of average risk.

VII. FINAL COMMENTS

Q. AS EQUITY INVESTORS DECIDED HOW MUCH TO PAY FOR FPL'S STOCK BEFORE THE ACCIDENT DID THEY CONSIDER THE RISK THAT THERE COULD BE AN OUTAGE LIKE THE ONE THAT ACCURED AT TURKEY POINT UNIT 3?

A. Yes. FPL's annual report says, "The operation and maintenance of power generation facilities, including nuclear facilities, involves significant risks that could adversely affect the results of operations and financial condition of FPL Group and FPL." Nowhere does the annual report tell investors not to worry about outage risks because the cost of such outages would become the burden of ratepayers.

Q. AS TODAY'S INVESTORS DECIDE HOW MUCH TO PAY FOR FPL'S STOCK WILL THEY CHANGE THE COST OF EQUITY THEY DEMAND BECAUSE OF THE TURKEY POINT UNIT 3 OUTAGE?

A. No. As explained above, because of the ability of investors to purchase stocks as part of a portfolio, investors are able to diversify the type or risk that this outage represents.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes it does.

RESUME OF AARON L. ROTHSCHILD

UTILITY REGULATION EXPERIENCE

- Filed or is in the process of filing expert testimony (or assisted in its preparation) on rate of return and/or financial issues with regard to electric, gas and water following jurisdictions:

Connecticut
Florida
New Jersey
North Dakota
Nova Scotia
Washington, DC

OTHER BUSINESS EXPERIENCE

- Strategic planning, business development and project management in telecommunications industry – North America and Asia Pacific
- Investment evaluation at investment bank

EMPLOYMENT HISTORY

Sep 1996- July 2000-	Head of Bus Dev	MCI WorldCom
Aug 2000-Jan 2001 -	Director	Dantis
Feb 2001-Sep 2001 -	Senior Manager	360 Networks
Jan 2002-Dec 2004 -	Consultant	Rothschild Financial Consulting
Jan 2005-Aug 2006 -	Financial Analyst	Chapman Spira (investment bank)
Sep 2006-Present -	Consultant	Rothschild Financial Consulting

EDUCATION

- Clark University, BA, Mathematics, 1994
- Vanderbilt University, MBA, Finance, 1996