BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Review of Progress Energy Florida's Rate Case Filing	DOCKET NO. 050078 Submitted For Filing: April 29, 2005

DIRECT TESTIMONY
OF
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ON BEHALF OF
PROGRESS ENERGY FLORIDA

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DIRECT TESTIMONY
OF
CHARLES J. CICCHETTI, Ph.D.

I: Introduction and Qualifications

Q. Please state your name, business and address.

A. My name is Charles J. Cicchetti. My address is Pacific Economics Group, 201 South Lake Street, Suite 400, Pasadena, California 91101.

Q. What is your position with Pacific Economics Group?

A. I am a Co-Founding Member of Pacific Economics Group.

Q. What are your duties as a member of Pacific Economics Group?

A. I actively consult with clients on price, costs, environmental, natural gas and electricity market issues and antitrust policies, particularly as those policies relate to regulated industries.

Q. Do you hold any other positions?

A. I hold the Jeffrey J. Miller Chair in Government, Business and the Economy at the University of Southern California.

Q. What is your educational background?

I attended the United States Air Force Academy, and I received a B.A. degree in Economics from Colorado College in 1965 and a Ph.D. degree in Economics from Rutgers University in 1969. From 1969 to 1972, I engaged in post-doctoral research on energy and environmental matters at Resources for the Future.

Q. Please summarize your professional experience.

A. I served as chief economist for the Environmental Defense Fund from 1972 to 1975, and was a faculty member at the University of Wisconsin from 1972 to 1985, ultimately earning the title of Professor of Economics and Environmental Studies. From 1975 through 1976, I served as the Director of the Wisconsin Energy Office and as Special Energy Counselor for the Governor. In 1977, I was appointed by the Governor as Chairman of the Public Service Commission of Wisconsin and held that position until 1979, and served as a Commissioner until 1980. In 1980, I co-founded the Madison Consulting Group, which was sold to Marsh & McLennan Companies in 1984. In 1984, I was named Senior Vice President of National Economic Research Associates and held that position until 1987. From 1987 until 1990, I served as Deputy Director of the Energy and Environmental Policy Center at the John F. Kennedy School of Government at Harvard University, and from 1988 to 1992, I was a Managing Director and ultimately Co-Chairman of the economic and management consulting firm, Putnam, Hayes & Bartlett, Inc. In 1992, I formed Arthur Andersen Economic Consulting, a division of Arthur Andersen, LLP. In late 1996, I left Arthur Andersen to co-found Pacific Economics Group, L.L.C.

Q. Have you published any papers or articles?

A. Yes. I have published articles on energy and environmental issues, public utility regulation, competition and antitrust. A complete listing of my publications is included in Exhibit No. ___ (CJC-1).

Q. Have you ever given expert testimony in a court or administrative proceeding?

A. Yes. A list of the proceedings in which I have provided expert testimony since 1980 is also included in Exhibit No. ___ (CJC –1).

Q. Who retained you for this testimony?

A. I have been retained to present testimony on behalf of Progress Energy Florida, Inc. (PEF or the Company).

II. Purpose and Summary of My Testimony

Q. How is the balance of your testimony organized?

A. In Section III, I discuss general rate relief topics. In this section, I discuss why it is important to treat PEF in a fair regulatory manner. I explain why this is important given the tremendous benefits that have been achieved for both customers and shareholders since the consummation of the merger and the last rate case, including the $125 million annual rate reduction for the period ending January 1,

2006 resulting from the last rate case settlement. Under the terms of the 2002 Settlement, there was a general rate reduction of 9.25% and the typical residential customer's monthly bills fell from $91.65 per 1000 KWH to $80.25, which is according to Mr. Lyash's Testimony, a reduction of about 16%. These 2002 reductions came after nearly a ten year base rate freeze from November 1993 until May 2002.

Customers are best served by encouraging PEF to continue its recent successes. Indeed, customers have already reaped many benefits since the last rate case. Much of the recent run-up in energy prices that are affecting other jurisdictions have, in effect, been paid for out of these efficiency and synergy savings that flowed from PEF's merger in late 2000. It is important to recognize PEF's efforts and not remove or restrict PEF's incentives to continue with its efforts.

In Section IV, I review the results of both internal and external benchmarking that demonstrate PEF's exceptional performance. The first is internal benchmarking data discussed in more detail by Messrs. Lyash, McDonald, DeSouza, Williams, and Young and Mrs. Morman-Perry that shows how PEF has been working to reduce its costs and to accommodate system growth. In effect, these activities inure to the benefit of current and future ratepayers.

The second analysis is a statistical analysis based on a proprietary econometric model of electricity production using a sample of 99 electric companies in the U.S. over a period of nine years (from 1995 through 2003). This analysis shows that for the period 2001 through 2003, ignoring its storm damage

and undergrounding requirements, PEF's actual total costs are 12.7% below what would be expected for a utility with its specific requirements, circumstances, and drivers. The 12.7% difference represents statistically significant superior performance.

In Section V, I review Dr. Vander Weide's recommended capital structure. In this section, I also explain why, if the Commission sets an equity share below the 55% that Dr. Vander Weide recommends, it would be necessary for the Commission to simultaneously increase PEF's authorized Return on Equity (ROE). I also discuss the effect that purchase power agreements have on the risk factors associated with the debt component of the equity structure.

In Section VI, I review Dr. Vander Weide's ROE analysis and capital structure. I conclude that his approach results in a just and reasonable floor for ROE and Rate of Return (ROR) using traditional approaches. I then discuss several important reasons that support my conclusion that the Commission should add 50 basis points to the ROE recommended by Dr. Vander Weide. These include: (1) precedent in Florida; (2) regulatory judgment; (3) the need to reward PEF for superior service quality and controlling costs; (4) 50 basis points effectively splits the difference between PEF's storm adjusted ROE and the ROE recommended by Dr. Vander Weide; and (5) a 12.8% ROE will enable PEF to maintain its superior service quality and cost control.

In Section VII, I restate my conclusions and summarize my policy recommendations.

Q. Please summarize your testimony.

A. My testimony covers four primary areas, each of which contains several related sub-topics. First, I discuss global rate relief policy issues and how those apply to PEF. Within this general topic, I discuss several matters that affect the context in which the Florida Public Service Commission (the Commission or FPSC) should decide the appropriate level of revenues and, in that regard, the rate of return for PEF. Here, I explain that while PEF has made recent improvements in attaining merger related synergies and implementing cost cutting measures, and that customers have already received in rate cuts from the Company's efficiency and synergy gains, the process is not yet completed. I explain why the Commission, in this hearing, should recognize PEF for its successes and take steps to encourage PEF to do more of the same by rewarding it with an additional 50 basis point bump to its authorized ROE. This proceeding should seek an outcome that is truly a win/win for customers and shareholders.

Second, to demonstrate the gains made by PEF, I discuss an external statistical analysis that I performed. This analysis demonstrates that PEF's costs are 12.7% below what I would have expected based on the statistical analysis of PEF's cost relative to the industry. I will also review the Company's internal benchmarking analyses to demonstrate the improvements that the Company has made relative to its pre-merger performance.

The third area in my testimony discusses Dr. Vander Weide's recommended capital structure for PEF. Here I discuss the targeted capital structure that he proposes and explain why: (1) it is just and reasonable to use a

45/55 debt-to-equity structure for PEF; (2) how this capital structure benefits consumers by improving the quality of PEF's debt, and (3) how this will result in lower long-term interest payments for decades to come, easing the burden and increasing the value of PEF's purchase power requirements. I also explain why and how purchase power contract costs affect capital structure and how at least a portion of these costs should be included in the debt component of capital structure.

The fourth area I discuss is Dr. Vander Weide's ROE analysis. It is well established that an ROE must be determined that is sufficient to enable the utility to (1) discharge its service obligations in a safe and reliable manner; (2) maintain its financial integrity; (3) attract the capital necessary for capital improvements required to maintain safe and reliable service; and (4) adequately compensate investors for their assumption of risk. I use these inter-related objectives as a backdrop to put Dr. Vander Weide's analysis in context and explain why I think the Commission should add 50 basis points to Dr. Vander Weide's recommended authorized ROE to reward PEF for its exemplary performance.

Q. Please summarize your conclusions.

A. I conclude that PEF's commitments in the 2002 Settlement, coupled with its performance since the last rate case, merit a positive consideration here. The Commission should continue to encourage PEF and not establish the wrong incentives for the future. I recommend setting the factors that affect ROR, such as the authorized ROE, near the top end of the ranges proffered in this rate case. PEF

competes against other utilities for capital, and its ROE should be set at a level high enough so that PEF can attract the required capital it will require in the near future. Thus, I conclude that adding 50 basis points to the authorized ROE is a reasonable way for the Commission to reward PEF for its exemplary performance and is consistent with precedent in Florida and other jurisdictions.

My overall conclusion is that a just and reasonable ROE for PEF is 12.8%, including the 50 basis point adder I discussed above. This ROE should be combined with a 45/55 debt/equity capital structure. Further, if the Commission establishes a different debt/equity capital structure, the ROE should be adjusted accordingly.

III: Policy Issues

Q. Do you have any general policy observations before you get into the details of your evidence?

A. Yes, I do. Particularly, I will discuss: incentives, PEF's successes and performance, and its special circumstances and needs.

Q. How should the Commission evaluate PEF and set rates?

A. The Commission should consider how the Company has performed in the past and the degree to which it has met its commitments to improve and achieve its goals. The Commission should also consider the Company's current financial condition, its current quality of service, and general financial and economic factors affecting the utility industry and cost of capital. Finally, the Commission should be

cognizant of future customer needs and the degree to which capital attraction is important in order to meet those needs.

Q. What do you mean by PEF's "past" performance?

A. PEF completed a merger in 2001. The Company put forward a rate case and set some significant post merger goals. As this current case demonstrates, PEF has essentially met or beaten its projections, achieving what it promised to do. As a result, customers have received a $125 million annual rate reduction and have reaped the benefits of improved safety, reliability, customer service, and increased cost effective power supply production.

These past efforts to improve efficiency and productivity should not be used, as some would likely propose, in a manner that takes away the incentive of utility success and passes it on to ratepayers. Such a policy would be tantamount to undermining much of the incentives for utility cost cutting and service enhancement. Here, PEF has used much of the past reduction to insulate its customers from a good portion of the recent energy price run-up and growing customer demand. The storm damages, continuing mounting energy costs, and need to add generation supply, among other things, have grown to be too strong.

PEF continues to seek further productivity and customer service gains. In this proceeding, current customers benefit in three ways under PEF's rate plan and proposal. These are:

- Customers capture specific cost savings, both fixed and variable, in PEF's current cost of service filing.

- Customer growth adds revenue that helps to retire rate base and pay for the carrying cost of capital. This revenue requirements gain is also reflected in PEF's rate filing.
- PEF proposes to reduce its current ROE to 12.8%, which would inure to the ratepayers' benefit.

Q. What would you propose?

A. I favor a middle ground form of cost-of-service regulation in which shareholders and customers both participate or share in the benefits of productivity and efficiency gains.

When sharing is adopted, utilities will reap rewards from past success, and customers, as they have here, will share in those achievements. Moreover, continuing to provide incentives to the utility to do more will typically mean a "win/win" situation for shareholders and ratepayers.

If a person works hard and achieves his/or her goals only to have the benefits of that hard work stripped away, it would not be unexpected if in the future that person did not work as hard or achieve as much. Incentives and rewards for hard work and accomplishments are important.

Some witnesses in this case will likely try to convince the Commission that PEF should cut its rates. They will likely propose that it is time to cut PEF's authorized ROE and equity share. The Commission should not follow such poor advice for several reasons, foremost of which is that the process that led to the success should be encouraged, not punished.

Q. Please summarize the settlement that was reached in the Company's last rate case.

A. When the Company's last rate case was filed, the merger that created Progress Energy had been recently completed. Testimony was presented as to the total merger savings that could be achieved and the costs necessary to achieve those savings. A plan was proposed that would equitably share the merger savings and benefits between customers and shareholders, a plan that would encourage and provide incentives to PEF to achieve these savings. Ultimately, a settlement was reached that accomplished these goals and customers received a $125 million annual rate reduction in 2002 after a nearly ten year base rate freeze. They also received $45.9 million in revenue sharing refunds.

Q. What is significant about the timing of this rate case?

A. There are several interrelated factors that make the timing of this rate filing significant. First, it is important to recognize that PEF has been very successful in achieving the savings promised by this merger. The improvements made by the Company are impressive. Second, it is important to realize that the position in which the Company is in today does not represent the end game. Nevertheless, as I outlined above, the consumers are capturing much of PEF's recent cost cutting and revenue gains in this case, and PEF is proposing to set its authorized ROE below its current earnings. Further, the Company intends to continue on its quest to provide superior performance. Third, and perhaps crucial, these efforts can be short-circuited if the Commission attempts to reduce the Company's ROE and capital structure based solely on the Company's current cost-of-service. Fourth,

the Company is planning major infrastructure investments to accommodate the residential customer growth on its system and to continue to provide superior service quality, safety, and reliability, and is facing required capital expenditures to comply with new EPA environmental requirements that will total hundreds of millions of dollars starting in 2005. Part of the requested rate increase is due to putting the Hines 2 power plant into rate base rather than recovering it through the fuel clause under the 2002 Rate Stipulation, and putting the Hines 3 generating plant, used to provide service to a growing customer base, into service in 2005. Additionally rates need to be increased to replace the storm reserve fund. Higher pension and other benefit costs are also pushing up rates.

Q. What role do current conditions play in this rate proceeding?

A. There are three types of relevant conditions: (1) customer satisfaction and service quality; (2) PEF's current financial condition and needs; and (3) the overall financial market and economic conditions in the utility industry.

First, when I was a regulator, I graded utility performance and service quality. I explicitly admitted that success and good service would be rewarded, while the laggards would be hurt financially. In fact, the first opportunity I had to change the rate of return for a major utility after I assumed the role as Chair of the Public Service Commission of Wisconsin was in 1979. In that case, I awarded Wisconsin Electric Power Company a 25 basis point bump to its authorized ROE to reward it for achieving superior performance that benefited its customers. I noted that utilities that did not meet these goals would be "punished" with lower

ROEs.[1] Subsequently, I rewarded the "best" utility with a 13.5% ROE, the very highest end of the then just and reasonable range. I kept the lower performers at 13%, the prior unofficial floor, or some 50 basis points below the "best" performer. To this day, some twenty-six years later, I continue to believe this is a sound regulatory principle. PEF has performed well with actual costs that are 12.7% lower than predicted by the statistical comparison of PEF and the industry. Moreover, this Commission has also recognized the incentives provided by rewarding a utility for superior performance.[2] In the 1999 Gulf Power earnings case, the Commission, in effect, awarded Gulf Power a 50 basis point reward to its authorized ROE. PEF is, among other things, cooperative, innovative, and pro-consumer. These and other factors that I discuss below should warrant a 50 basis point performance reward to be added to PEF's authorized ROE.

Second, interest rates are increasing. Capital markets are becoming highly interdependent and integrated. Florida is in a relatively unique position as a state that retains a traditional cost-of-service regulatory approach, while its utilities, such as PEF, are continuing to grow and need to attract significant capital in order to build needed infrastructure and meet new EPA environmental requirements.

There is an external group of analysts and large investment groups that purchase large blocks of utility equity and debt. These analysts will grade Florida's regulatory treatment of PEF. Specific issues such as ROE, equity share,

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[1] *Findings of Fact and Order re Application of Wisconsin Electric Power Company for Authority to Increase its Electric Rates*, 1979 Wisc. PUC Lexis 45 (March 6, 1979).

[2] *In re: Investigation into the Earnings and Authorized Return on Equity of Gulf Power Company*, 1999 Fla. PUC LEXIS 915, 99 FPSC 5:305 (May 24, 1999).

the likely achievement of authorized revenues, the use and funding of reserve accounts, among others, will affect this external grade.

As a former regulator, I understand this. A good grade meant lower capital costs for consumers. Since my state at the time was adding significant new utility investments, much as PEF will be doing, I recognized that treating utilities justly and relatively well (*i.e.,* at the high end of the reasonable range of ROE) would inure to the benefit of ratepayers.

Q. Why shouldn't the Commission reset PEF's ROE to 12.3% along with other savings in its current cost of service?

A. To do so would ignore the ongoing efficiency and customer service improvements. As I testified at the Company's last proceeding, the merger related synergy savings are real and achievable. However, the savings are not achievable without some cost. In order to provide the Company with the correct incentives to continue on its current path, which has already yielded $125 million in annual benefits to customers, the Commission must recognize that these savings achieved by the Company should be encouraged by erring in the direction of establishing a financially sound and healthy utility. It would be to the customers' detriment if PEF is, in effect, discouraged from adding to its good work since its last rate case. There should be some modest sharing between customers, which have three beneficial drivers in this proceeding (cost reduction, growth, and a lower ROE) and shareholders.

Q. Are you suggesting that the Commission continue to try to quantify merger related savings?

A. No. As time goes forward, it becomes increasingly difficult to identify synergy related merger savings. Progress Energy has completed the merger, the companies have been combined, in effect scrambling the eggs. The 2002 Settlement resulted in a 9.25% levelized reduction in base rate unit costs that reduced retail rates by $125 million and cut residential rates up to 16% for a typical 1000 kwh customer. (See Testimony filed by Mr. Lyash). This eased much of the "pain" caused by the run-up in worldwide energy prices. It would be a largely futile task to attempt, at this juncture, to identify what the previous unmerged companies' costs would have been absent the merger and compare those "but-for-the-merger" costs with current post merger costs. Such an exercise would be time-consuming, costly, and dependent on assumptions that would likely differ between parties. Ultimately, the resulting savings numbers could only be assigned with a high degree of subjectivity. It would be akin to trying to identify the individual eggs in an omelet.

Q. Please summarize your key points.

A. My overriding point is that the Company's achievements to date are strong and at the same time incomplete. These efforts should be rewarded. The Company should be encouraged to continue to improve performance, build up its equity, and improve its bond ratings. This is especially important for a company like PEF that is located in a non-restructuring state and is facing substantial costs to expand its infrastructure to accommodate residential growth. These improvements will benefit both customers and shareholders alike.

In this proceeding, particularly, I strongly urge the Commission to favor a combination of high equity share and the highest possible just and reasonable ROE (plus a 50 basis point adder) to determine an ROR on rate base. I do this for three reasons: (1) PEF's success in increasing efficiency, its cooperation, innovation, and its pro-consumer stance; (2) PEF's current capital needs for new infrastructure and generation relative to other jurisdictions in the nation that have no significant growth; and (3) market expectation. Thus I support adding 50 basis points to the Commission's authorized ROE. Starting with Dr. Vander Weide's 12.3% recommended ROE, this would mean and I would propose a 12.8% ROE, as well as a 45%/55% debt to equity capital structure.

IV. Benchmarking Analysis

Q. Has the Company performed any internal analysis that compares its performance today with its pre-merger performance?

A. Yes. The Company has performed an internal analysis that compares PEF to its prior self. The results are summarized in Mr. Portuondo's Testimony, which I describe below. The various components are described in detail in his testimony, as well as the testimony filed by various other PEF witnesses. This comparison or inter-temporal internal benchmarking analysis shows that since the time the merger was completed, the Company has improved its efficiency and its performance in several key areas.

Q. What do you conclude after reviewing these testimonies?

A. I conclude that PEF's performance has been outstanding and its improvements have met or exceeded expectations. For example:

- Employee safety improved by over 50%, moving the Company to almost the top quartile (See Mr. Lyash's testimony);
- PEF's System Average Interruption Duration Index (SAIDI) (a measure of system reliability) was improved by 23%, dropping from 100.6 in 2000 to 77 in 2004. This bettered the Company's commitment of 80 minutes. (See Mr. Lyash's testimony);
- Residential base rates were reduced by up to 16% for a typical 1000 kwh customer placing PEF in the top quartile of Florida electric utility companies. (See Mr. Lyash's testimony);
- Customer service improved, moving PEF from the third quartile to the first quartile, as reported by J.D. Powers and Associates 2004 Electric Utility Residential Customer Satisfaction Service. (See Mr. Lyash's Testimony). Progress Energy ranked number one in the J.D. Powers Customer Service component of the survey for the Southern Region. (See Mrs. Morman-Perry's Testimony);
- At the eighth annual Customer Service Awards program at Edison Electric Institute's Spring National Accounts Workshop, Progress Energy (along with American Electric Power, Cleco Power, and Oklahoma Gas & Electric) was named as one of the electric companies offering the best overall customer service in 2004. (See Mrs. Morman-Perry's Testimony);

- Installation cost for new service was reduced, from $120 per customer to $102 per customer, placing PEF in the second quartile of peer utilities. (See Mr. Lyash's testimony);
- A recent Florida Public Service Commission Report ("Review of Florida's Investor-Owned Electric Utilities' Distribution Reliability") reported that PEF improved on seven of eight performance metrics. (See Mr. McDonald's Testimony);
- Transmission reliability improved by 37% since 2002. Transmission related SAIDI dropped from 16.26 minutes in 2002 to 10.23 minutes in 2004. (See Mr. DeSouza's Testimony);
- Fossil steam units bested the national average availability for 2004 (85.8% based on NERC data) by improving from 86.9% in 2002 to 89.7% in 2004. When adjusted for hurricane related events, the availability increases to 90.2%. (See Mr. William's Testimony).
- The forced outage rate for fossil fuel units was 2.27% when adjusted for hurricane related events, comparing favorably to the 2003 industry average of 5.04%. (See Mr. William's Testimony).
- Similarly, PEF's combustion turbine and combined cycle fleet beats industry reliability averages, with combustion turbine reliability at 99.5% for 2004 (compared to the industry average of 80% based on NERC data). (See Mr. William's Testimony);
- The Hines combined cycle units completed 2004 with an equivalent availability factor of 90.9%, easily beating the industry average of 79.8%. (See Mr. William's Testimony).

- PEF's nuclear unit (CR-3) ranks in the top quartile of all U.S. nuclear plants in most key performance areas. This is all the more impressive when one considers that CR-3 is ranked in the top quartile of all nuclear facilities in terms of plant safety. (See Mr. Young's Testimony).

Q. What are your conclusions with respect to PEF's internal benchmarking studies?

A. I conclude that PEF has made remarkable progress in improving its service quality and reliability while continuing to aggressively manage and reduce its costs. PEF is now consistently ranked in the top quartile of all utilities in the country and is poised to continue its improvement in these areas. PEF should be recognized and commended for its excellent work on behalf of its customers.

Q. You stated that you also performed a statistical benchmarking study of PEF's cost performance. Please describe that statistical analysis.

A. PEG has developed a proprietary econometric model of electricity production. I directed my colleagues to use this model to analyze PEF's costs over the period 2001-2003. The analysis utilizes publicly available cost data for 99 utilities over the period 1995-2003, the last period for which data is currently available. This analysis uses rigorous econometric methods that are needed to develop holistic performance assessments.

Q. Please describe the statistical analysis of PEF's cost performance.

A. First, it is very important when conducting an analysis of a utility's cost performance that care is taken to account for any differences between utilities or over time. For example, one fact that seems particularly important is that PEF has a relatively high component of residential customers in its customer mix. If PEF's performance is measured, without making statistical adjustments, against a utility that has a relatively large industrial component to its customer mix, the results are likely to be misleading. Another factor is weather variability and uncertainty, which also needs to be accounted for statistically. PEG's econometric model significantly makes these statistical adjustments so that meaningful comparisons can be made.

Q. Please explain, in layperson's terms, what your model does.

A. The econometric model reflects the effect of various variables on the production of electricity. The unadjusted percent of the variation in the dependent variables in this model explained about 98% of the variation in total cost across the electricity industry. Some of the key cost drivers in the model are:

- Labor prices
- Capital prices
- Energy and fuel prices
- Residential and business sales volume
- Peak demand
- Number of natural gas customers (synergy)
- Growth in customers
- Share of residential and other customers

- Transmission and distribution
- Probability of tropical storm activity
- Time period

These data are combined into a Total Cost Function. The theory is that the cost for company *i* (C_i) is a function of the minimum industry-wide achievable costs (C_i*) and its specific efficiency level. The minimum achievable cost depends upon labor, capital, and other inputs. Age of plant and capital mix also matter, as do the volume and type of products, type of customers served, and specific market or locational conditions. These various explanatory factors are incorporated into a natural logarithm model, which adds complexity but facilitates the interpretation of the apportionment of cost responsibility to the various cost determinants contained in the model.

The statistical approach was developed theoretically and empirically in the 1970s. Its full technical name is "Transcending Logarithmic," or Translog for short. This approach uses the economic theories of how firms efficiently produce the products they sell, and as a consequence, minimize their corresponding total production costs.

Total cost is the focus of this extensive econometric research, which has been applied extensively for many different industries across the world and over time. Perhaps one of the most extensively analyzed industries is electric power. Indeed, the analyses of electricity production functions and total cost functions are where much of this modern-day marriage of economic theory and advanced econometric applications began.

Q. What were the results of this econometric analysis of PEF's costs?

A. I found that PEF's actual costs for the period studied were 12.7% below the costs the model predicted for PEF for a three-year composite period. This is an extraordinary achievement and indicates the depth of PEF's cost level efficiency on a statistical basis.

Q. What are the annual savings for the three-year period for which you compared PEF's total costs to the efficient industry prediction?

A. The three-year composite score translates to an industry total cost prediction of $3,323,121,000 and an actual composite score for PEF of $2,926,784,000. This represents an annual equivalent savings for PEF of $396.3 million. Therefore, this 12.7% advantage saved PEF's ratepayers about $396.3 million per year compared to the efficient industry benchmark utility.

Q. How did you approach the task of determining PEF's performance relative to the industry?

First, I estimated the Total Cost function for the industry, omitting the firm that analysts seek to score or compare relative to the industry. This refinement is widely accepted for performing such comparisons. The firm being analyzed is not included in the sample used to estimate econometrically the industry-wide total cost, segment cost, and share functions.

Second, I compared the predicted score of the firm in question using the industry model to the actual score of the firm in question.

Q. Please explain your Total Cost comparison of PEF's performance relative to the industry.

A. Table 1 shows PEF's actual Total Cost scores relative to the corresponding scores based upon the industry model of how efficient firms in the U.S. would produce electricity. These scores are stated in natural logarithmic form. The difference between the logarithm of predicted total cost for an efficient firm and PEF represents PEF's total cost advantages or savings relative to the industry. This means that if PEF's unique characteristics (*e.g.* ,residential sales volume, purchase power prices, labor prices, etc.) were assigned to a firm of average efficiency in the electric industry, the percentage advantages shown in Table 1 would be the percentage savings that PEF has achieved since its merger.

TABLE 1

PEF'S TOTAL COST SCORES RELATIVE TO INDUSTRY

YEAR	ACTUAL SCORE	PREDICTED SCORE	PERCENTAGE ADVANTAGE PEF TO INDUSTRY
2001	17.165	17.277	-11.20%
2002	17.162	17.313	-15.10%
2003	17.248	17.367	-11.80%
Three Year Composite Score	17.192	17.319	-12.70%

In 2001, PEF had an 11.2% cost advantage, or relative savings. This percentage increased in 2002, and returned to 11.8% in 2003 as fuel and purchase power cost increases began to hit PEF relatively more than others.

Over the three-year period, I determined that PEF's corporate advantage relative to a firm with average efficiency with PEF's requirements and characteristics was a negative 12.7%. PEF's actual total cost savings beats the industry prediction by 12.7%.

Q. Did you also review separately PEF's capital cost segment?

A. Yes. Here, I examined the same sort of logarithm score for an economist's measure of capital cost in which current replacement cost dollars are imputed. Based upon this approach, Table 2 shows that PEF has about a 39.6% capital cost advantage over a comparable "efficient firm in the industry" with PEF's requirements.

TABLE 2

PEF'S CAPITAL COST SCORES RELATIVE TO INDUSTRY

YEAR	ACTUAL SCORE	PREDICTED SCORE	PERCENTAGE ADVANTAGE PEF TO INDUSTRY
2001	16.121	16.474	-35.30%
2002	16.093	16.510	-41.70%
2003	16.146	16.562	-41.60%
Three Year Composite Score	16.120	16.516	-39.60%

Two other facts are important. First, PEF's scores have also declined by 7% between 2001 and 2003. This is also very beneficial for PEF's consumers. Second, PEF purchases long-term power. This would partially offset these very impressive PEF capital cost advantages, but not PEF's three-year improvement o 7% relative to itself.

Q. Have you broken out or isolated the distinction between PEF's energy and non-energy scores relative to the industry?

A. Yes. Table 3 shows that PEF outperforms the industry by 32.5% for the composite score over a three-year period when I remove energy (purchase power and fuel).

TABLE 3

PEF's 'NON" PURCHASE POWER AND FUEL COST SCORES RELATIVE TO THE INDUSTRY

YEAR	ACTUAL SCORE	PREDICTED SCORE	PERCENTAGE ADVANTAGI PEF TO INDUSTRY
2001	16.560	16.852	-29.20%
2002	16.551	16.884	-33.30%
2003	16.588	16.938	-34.90%
Three Year Composite Score	16.567	16.891	-32.50%

In contrast to PEF's very favorable scores in Tables 2 (capital) and 3 (non-energy), Table 4 shows that PEF has 16.2% higher fuel and purchase power costs.

TABLE 4

PEF'S COMBINED PURCHASE POWER AND FUEL COST SCORES RELATIVE TO INDUSTRY

YEAR	ACTUAL SCORE	PREDICTED SCORE	PERCENTAGE ADVANTAGE PEF TO INDUSTRY
2001	16.374	16.216	15.90%
2002	16.379	16.260	12.00%
2003	16.521	16.313	20.80%
Three Year Composite Score	16.425	16.263	16.20%

These results reflect a combination of clean fuel and increased purchase power regulatory policies in Florida. Nevertheless, together, the net gain for Florida over all four tables, as well as discussed below, represents a distinct advantage.

This means that PEF's current and long-term business and investment strategies and performance exceed the best prediction for PEF using the efficient industry model.

Q. Have you considered other cost categories?

A. Yes. Table 5 shows the "other" costs comparison. Economists typically think of these "other "costs as items such as material costs and outsourcing.

TABLE 5

PEF'S "OTHER" COST SCORES RELATIVE TO INDUSTRY

YEAR	ACTUAL SCORE	PREDICTED SCORE	PERCENTAGE ADVANTAGE PEF TO INDUSTRY
2001	15.148	15.335	-18.70%
2002	15.114	15.353	-23.90%
2003	15.076	15.419	-34.20%
Three Year Composite Score	15.113	15.369	-25.60%

'Other" means non-labor, non-capital, and non-energy (fuel and purchase power)

PEF has reduced these other costs relative to itself by 7.2% over three years; while the industry has been increasing these other costs by 8.4%. PEF has outperformed the efficient firm in the industry standard by 25.6% over the same three-year composite basis.

Q. How do PEF's O&M costs compare to the industry?

A. Table 6 shows that over the three-year composite time period, PEF has rather consistently outperformed the efficient firm industry standard by 18.5%.

TABLE 6

PEF'S O&M COST SCORES RELATIVE TO THE INDUSTRY

YEAR	ACTUAL SCORE	PREDICTED SCORE	PERCENTAGE ADVANTAGE PEF TO INDUSTRY
2001	15.526	15.698	-17.20%
2002	15.551	15.719	-16.80%
2003	15.559	15.776	-21.70%
Three year Composite Score	15.545	15.731	-18.50%

Q. How does PEF's labor cost compare to the industry?

A. Table 7 shows a modest advantage of 4.5% for PEF relative to the industry using the three-year composite score.

TABLE 7

PEF'S LABOR COST SCORES RELATIVE TO INDUSTRY

YEAR	ACTUAL SCORE	PREDICTED SCORE	PERCENTAGE ADVANTAGE PEF TO INDUSTRY
2001	14.370	14.508	-13.80%
2002	14.513	14.537	-2.40%
2003	14.600	14.573	2.70%
Three Year Composite Score	14.494	14.539	-4.50%

The biggest advantage in labor cost savings occurred in the first year after the merger was completed. Since then, the Company has added labor to enhance customer service quality and reliability. This often involved training and other new labor costs.

Regardless, in the context of an 12.7% overall superior performance relative to the best industry model prediction for PEF with respect to Total Cost, PEF has consistently outperformed the efficient industry performance standard and saves ratepayers about $396.3 million per year.

Q. What are the limitations of this analysis if the last full year for which data is available is the end of the year 2003?

A. PEF handily beats the industry benchmark for an efficient electric utility. These results are relatively long-term in nature because electric utilities do not typically

make major changes in the way they conduct their business and provide energy from year to year.

That said, I did perform two additional tests. This was to compare PEF's actual 2004 total operations and maintenance expenses to its own internal budget in order to determine if PEF was staying its course and continuing to perform well for the last full calendar year of this rate cycle.

Q. Have you analyzed PEF's performance in 2004 using the econometric model?

A. Yes. I analyzed PEF's actual and predicted costs in 2004 on a preliminary basis because I do not have the full industry sample for 2004. Accordingly, I predicted PEF's performance out of the time period of the sample in 2004 and compared these estimated costs to PEF's actual 2004 performance. I found that PEF continues to have superior performance relative to the utility industry. PEF's relative cost and productivity performance continue to be impressive compared to the industry.

Q. What additional benchmarking data did you consider?

A. I have reviewed Mr. Javier Portuondo's data used for PEF's Minimum Filing Requirements (MFRs) in order to bring the benchmarking analysis beyond the period for which national data is available. I specifically analyzed PEF's Total Other O&M Expenses since the merger in 2002 and as projected for 2006 on a comparable accounting or per book financial basis for these two years.

Q. What expenses are included in Total Other O&M Expenses?

Table 8 PEF's Total Other O&M Expenses		
	Dollars Per Customer	
Expenses	**2002**	**2006 (Projected)**
Power Production	$126.47	$131.33
Transmission	$21.33	$17.24
Distribution	$55.51	$50.43
Customer Account	$34.82	$31.70
Customer Service	$2.57	$2.74
Sales	$3.58	$2.29
Administrative & General	$103.69	$132.05
TOTAL OTHER O&M	**$347.97**	**$367.78**

Q. How do the changes in PEF's Other O&M costs per customer from 2002 to 2006 compare to PEF's fundamental cost drivers over this five-year period?

A. There are three fundamental cost drivers. Two effectively are outside PEF's ability to control. Those are inflation and customer growth. In addition, while PEF is committed to conservation, it does not fully control the third cost driver: the MWHs that it has a duty to provide.

Over these five years, these three cost drivers have increased as follows: (1) the Consumer Price Index (CPI) from 179.9 to 193.1, or 7.34% over five years; (2) Customer Growth of 8.67% over five years; and combined with the CPI, a 16.65% increase in inflation and customers; and (3) MWHs sold growth of 8.73%.

During this same five-year time period, PEF's Total Other O&M Expenses per customer increased by 5.69%. This means use per customer has remained relatively constant. During this same five-year period, the relatively small increase in dollars per customers is less than inflation. This represents a gain for consumers, especially since utilities often find new customers and growing use can

increase average or unit operating costs. PEF has beaten inflation, which alone would have put unit costs per customer in 2006 at $373.51, which is above PEF's projection of $367.78. PEF has done this while adding customers and increasing MWHs sold by about 8.7%, without adding to the unit costs per customer.

Q. What do you conclude from these internal and external analyses?

A. I conclude that PEF is delivering on its promise to ratchet up its cost and service performance both relative to itself and to its peers. Quality of service and reliability have improved. My comparison with the rest of the industry shows that PEF has a significant degree of efficiency and performance advantage based upon the most recent industry data. Finally, PEF's MFR data show that it is on track to continue to improve through 2006.

As I have said earlier in this testimony, this good work is not yet complete. In effect, sharing 50 basis points of ROE with PEF for its achievements and success to date would tend to cause these efforts to continue. Customers would benefit more and for a longer period of time if PEF is rewarded for its performance and encouraged or incented to continue its service quality improvement and cost cutting efforts. The Commission can accomplish this by authorizing returns and setting revenue targets towards the high end of their respected ranges, and including a 50 basis point adder to PEF's authorized ROE. I explain this in greater detail in Section VI. This progress would be further enhanced by establishing a 45/55 debt to equity structure as recommended by Dr. Vander Weide. I explain this in greater detail in Section V.

V. Capital Structure

Q. What capital structure is PEF preparing for this filing?

A. The Company has targeted a capital structure that is 55% equity and 45% debt. I support PEF's intentions and purpose, as discussed in Dr. Vander Weide's testimony. I support Dr. Vander Weide's recommendation. I would also recommend thickening the equity share of PEF's capital structure if the Commission sets the ROE below Dr. Vander Weide's recommended 12.3%.

Q. How do you approach the debt/equity structure issue?

A. Reviewing the debt/equity structure issue requires a combination of regulatory judgment, financial and business reasons, and considering current facts. My personal bottom line is "do what is best for consumers" in the long-run.

Q. What do you mean by the regulatory judgment component of the analysis?

A. The regulator's role is to determine a just and reasonable rate of return (ROR).[3] This often requires considering many factors, some of which might be offsetting. Nevertheless, most authorities, including the U.S. Supreme Court, accept a standard that produces a reasonable "end result." I consider this to mean that some factors may be low, others high, and others just right. Regardless, when combined, the outcome can often be deemed just and reasonable.

[3] ROR can be defined as: ROR = Percent Debt (Interest Rate) + Percent Equity (Authorized ROE).

The "end result" necessarily considers the effect on both customers and shareholders. This is a second type of balancing that takes place in a rate case. This overarching principle is relatively simple. While lower RORs would mean lower regulated prices in the short run, understating RORs will hurt consumers in the long run. RORs should be set at a level sufficient to attract new capital that is needed for necessary investment in infrastructure. Without such investments, the gains and improvements made by PEF will be threatened.

Customers could face a future marked by reduced service quality, service disruptions, and higher costs for replacement energy and/or long-term purchase power agreements. Customers have as great a stake in the outcome of a rate case as do shareholders. The customers, for example, need assurance that the ROR is set at a level that is sufficient to allow PEF to continue on its current course of improving its performance, to the benefit of customers. The key is that, all other things equal, an ROR that is sufficient to attract capital at a low cost will benefit customers. This conclusion is extremely important for a utility like PEF that is located in a state that is not restructuring its electricity industry and that needs to attract capital in financial markets to finance its planned infrastructure investments, including necessary environmental upgrades required by the new EPA regulations. Florida needs a good financial outcome in a rate case to achieve both shareholder expectations and to satisfy customer needs at a reasonable cost.

Q. What are the specific financial and business components to the debt/equity ratio and how do these affect consumers?

A. First, consider the formula used to express ROR and the fact that interest rates on debt (ROD) are a component of ROR and typically less than the expected ROE. Since ROD is less than ROE, it would seem, from a mathematical perspective, that a business could lower its overall ROR by borrowing more of its capital and eschewing equity finance. However, this is too simplistic for several reasons. First, as the debt to equity ratio increases, the ROD will begin to increase as bond ratings are lowered, raising the overall ROR.

Second, financial risk of the firm is higher as the debt-to-equity ratio increases, particularly relative to other firms with comparable requirements and with similar business, economic, and regulatory risks.

Third, there are valid business reasons for a business not to borrow 100% of its capital. A business has an obligation to make interest and debt reduction payments before paying dividends, retaining earnings, or repurchasing outstanding shares. As debt increases, business risk and cost also increase. An all debt firm would live in the constant shadow of bankruptcy. Any unexpected event could push it into failure. Accordingly, the risk adjusted cost of capital, also known as ROR, would increase for highly leveraged firms. Thus, a reasonable and well reasoned balance must be struck for setting a regulated firm's capital structure.

Q. But didn't you just state that debt is less expensive than equity?

A. Yes, other things equal, debt is less costly than equity. Nevertheless, as I discussed above, regulators and financial markets recognize that too much debt is inherently risky. A firm with a significant degree of indebtedness also has lower

quality debt, and therefore, higher fixed financing costs, greater interest payments, and/or liabilities. Such firms generally have lower debt ratings and, as a result, higher interest costs. Moreover, a more highly leveraged firm (*i.e.,* one with more debt) will have more expensive equity, in part because investors view highly leveraged firms as risky investments.

In addition, with more debt, operating income or margins must cover significantly greater annual interest payments before equity investors can receive any earnings per share and/or dividends. This increases equity risk. These combine to increase financing costs for necessary new investments. These factors also increase the costs of long-term supply contracts and, in the extreme, could reduce a utility's access to debt, equity, and long-term purchase power agreements (PPAs).

Several utilities now purchase a disproportionate share of their electricity for resale. These utilities are often located in fully restructured states in which some utilities now purchase 100% of their customers' energy needs. These states and their share of energy purchases are not comparable to PEF, which effectively remains the sole provider of retail energy requirements.

A second difference is that some utilities purchase a large share of their retail needs in short or intermediate term spot and forward or futures markets. These utilities are not comparable to PEF with its long-term fixed cost recovery PPAs. As PEF uses more PPAs, it is very similar to increasing the risk inherent in carrying more debt.

High debt shares or ratios work against retail customers by increasing the

risk of both debt and equity, thereby increasing their respective cost. Regulators traditionally have sought to regulate stand-alone utilities that are making significant new investments in the future based on a capital structure with a thick, or relatively high, equity share. This permits regulators to eschew financial risk, improve debt ratings, hold down long-term debt payments, and target authorized RORs at levels that provide the utility with necessary capital while protecting customers in terms of least cost financing principles.

The Company has committed itself to attaining a capital structure of 55% equity by the end of the rate year. I view this as an important step. However, PEF likely needs to go further, and grow equity in the future as it continues to grow and make necessary capital additions. This is why I support Dr. Vander Weide's recommended capital structure.

Q. You stated that PEF's long-term contractual commitments for purchase power add a debt-like fixed cost recovery requirement to PEF's cash flow from operations. How does PEF compare to other companies with respect to this purchase power component?

A. In Table 9, I show the purchase power component for the various utilities around the country that are included in Dr. Vander Weide's peer group for his traditional ROE analyses. The information contained in this table is culled from the FERC 1 filings made by each company. The information on the S&P bond ratings is from Dr. Vander Weide's Testimony.

Purchase Power vs Generated Power			
Utility	Nov '04 S&P Bond Rating	% Generated	% Purchased
Ameren	A-	60	40
Cinergy	BBB+		
Cincinnati Gas & Electric		82	18
Union Light		0	100
PSI Energy		85	15
Consolidated Edison	A		
The Consolidated Edison of New York		3	97
Orange and Rockland Utilities		0	100
Constellation Energy	BBB+		
Baltimore Gas & Electric		0	100
Dominion Resources	BBB+		
North Carolina Power		N/A	N/A
Virginia Power		76	24
DTE Energy	BBB+		
Detroit Edison		88	12
Duke Energy	BBB	98	
Energy East	BBB+		
NYSE&G		21	79
Rochester Gas & Elect		64	36
Central Maine Power		0	100
Entergy	BBB		
Entergy Arkansas		68	32
Entergy Louisiana		54	46
Entergy Mississippi		38	62
Entergy New Orleans		28	72
Entergy Gulf States		52	48
Entergy Power		73	27
Exelon	A-		
PECO		0	100
ComEd		0	100
FirstEnergy	BBB-		
Pennsylvania Power		50	50
Jersey Central		0	100
Cleveland Electric		37	63
Ohio Edison		24	76
Metropolitan Edison		0	100
Toledo Edison		34	66
Pennsylvania Electric		1	99
FPL Group	A	80	20
Great Plains Energy	BBB		
Kansas City P&L		94	6
Hawaiian Electric	BBB		
HECO		59	41
Maui Electric		94	6
MDU Resources	A-	72	28
Northeast Utilities	BBB+		
Connecticut Power & Light		0	100
Public Service Co. New Hamp		72	28
Western Massachussetts	0	0	100
NSTAR	A		
Boston Edison Company		16	84
Cambridge Electric Light Company		9	91
Commonwealth Electric Company		15	85
OGE Energy	BBB+	83	17
Otter Tail	A-	63	37
Pepco Holdings	BBB+		
Potomac Electric Power Company		0	100
Conectiv			
Atlantic City Electric Company		19	81
Delmarva Power & Light Company		0	100
Pinnacle West Capital	BBB		
Arizona Public Service Company		44	56
PPL	BBB		100
Progress Energy	BBB		
Carolina Power & Light		93	7
Progress Energy Florida		79	21
Public Service Enterprise	BBB		
PSEG Energy Resources		0	100
PSEG Fossil		100	0
PSEG Nuclear		100	0
Public Service Electric and Gas Company		0	100
Puget Energy	BBB-	27	73
SCANA	A-		
South Carolina Electric		76	24
South Carolina Generating Company		100	0
Sempra	BBB+		
SDG&E		34	66
Southern Co.	A		
Alabama Power		90	10
Georgia Power		78	22
Gulf Power		90	10
Mississippi Power		78	22
Savannah Electric		47	53
Southern Electric Generating Company		100	0
Vectren Corp	A-		
Southern Indiana Gas and Electric		61	39
Wisconsin Energy	BBB+		
Wisconsin Electric		86	14
Edison Sault Electric		21	79
WPS Resources	A		
Wisconsin Public Service		82	15
Upper Penninsula Electric		15	85
Xcel Energy	BBB		
Northern States Power (Minn)		76	24
Northern State Power (WI)		17	83
Public Service CO Colorado		56	44
Southwestern PSC		81	19

Information from FERC Form 1 for 2003

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It can be seen that in those states that have retained a traditional regulatory framework, PEF has a relatively high percentage of purchase power and most of PEF's purchases are long-term purchases, not spot purchases, which is unlike many other utilities. Thus, the 45% debt/55% equity capital structure recommended by Dr. Vander Weide is not as free of debt related risk once the purchase power contracts, which are akin to a long-term debt commitment, are considered. Mr. Sullivan discusses this in his Testimony, specifically how off balance sheet debt obligations increase PEF's projected 2006 leverage ratio from 45% to 52.29%.

Q. Do you have an opinion as to whether purchase power contract costs should be included in the debt component of the capital structure?

A. Yes, I do. I have reviewed Mr. Sullivan's testimony and concur with him that PEF's rates should reflect the effect of imputed debt associated with long-term PPAs. Purchase power contracts are an alternative method for a utility to secure the generation needed to serve its customers. Consider the fact that if PEF did not enter into purchase power contracts, it would need to build new generation facilities to serve its native load. There is no question that PEF would need to borrow money to secure outside power. The debt component associated with new generation stations would be included in the capital structure calculation. PPAs are an alternative long-term financial liability, much like seeking new rate base with secured first mortgage debt. In these ways, PPAs are equivalent to and serve a similar purpose (*i.e.,* providing electricity to serve native load). Therefore, a

portion of the purchase power contract costs should also be included in the debt component of PEF's capital structure. In addition, any fixed long-term payment is a source of higher financial risk for equity holders because, as with bonds, these fixed cost PPAs need to be repaid before any money is available to shareholders.

Q. What are you recommending?

A. I recommend in this proceeding that the Commission should accept Dr. Vander Weide's capital structure at 55% equity and 45% debt and approve the Company's consideration of PPA's in its request for rate relief. PEF has about $3 billion in debt when off-balance sheet debt is included.

VI. ROE

Q. What is your role in the ROE portion of this proceeding?

A. Dr. Vander Weide is the Company's ROE witness in this proceeding. My role is to put Dr. Vander Weide's authorized ROE recommendations into a broader context and to explain, as I have been doing, why an additional 50 basis points should be added to Dr. Vander Weide's recommended 12.3%, raising the ROE to 12.8%, which is just and reasonable here.

Q. Please summarize traditional regulatory treatment of ROE.

A. The first step in authorizing the ROE is to review various cost of capital estimation approaches, using formulae and historical information. The core principle in

sorting through these often differing estimates is the *Hope Natural Gas* and *Bluefield Water Works*[4] criterion that recognizes a utility's need to attract capital. Dr. Vander Weide finds that PEF requires a 12.3% (12.8% with the 50 basis point adder) ROE to do this. I agree with his conclusion. I take it another step, however, and urge an approach where this Commission would move to the very high end of the "just and reasonable" range in setting ROE for PEF.

Q. Why do you support 12.8% ROE in this proceeding?

A. There are several lines of reasoning that guide my recommendation.

First, consumers benefit when utility companies are financially healthy and, as a result, they can finance necessary investments at reasonable or relatively low long-term costs.

Second, just as performance and capital structure targets are important, I believe that other utility companies and regulatory jurisdictions should be analyzed. When I examine other utility companies and regulatory jurisdictions, I find that both PEF and Florida do quite well. That said, aiming high at superior performance often helps us achieve additional beneficial results. Here, I explain how I would look outside to set a higher bar for achievement. I do this to encourage more productivity improvements and greater future consumer benefits.

Third, PEF has not had a base-rate price increase since 1993, and in fact provided residential customers with a $125 million annual rate reduction in the last

[4] *FERC v. Hope Natural Gas Co.*, 320 US 591 (1944); *Bluefield Water Works and Improvement Co. v. Public Service Commission*, 262 US 679 (1923).

rate case settlement. This means that PEF will have gone more than a dozen years since its last base rate increase, but with some decreases, when the new rates would be applicable in 2006. In fact, base rates today for the typical 1,000 kwh customer under the current rate freeze are about what they were in 1983. Adjusting for inflation, the current base rate is $41.18 per month for 1,000 kWh, or about 4.18¢ per kWh, at the end of 2004. This is equivalent to about 2.171¢ per kWh in 1983. This is nearly a 90% decline in inflation-adjusted base rate prices.

Consumers and the Florida economy have benefited and continue to benefit from this achievement. PEF is, therefore, one of the successful utility companies in the nation and quite distinct from the gaggle of utilities whose inability to hold down base rates caused their states to restructure and essentially deregulate the electricity industry.

After some 23 years, PEF is, in effect, seeking to raise base rates to about 5.01¢ per kWh related to adding new generation and replenishing storm reserve funds. This is a small fraction of the inflation-adjusted decline of 90% that consumers have enjoyed. In fact, in 1983 dollars, the new proposed base rate would still be below 2.4¢ per kWh.

Fourth, PEF has several specific reasons why it seeks to add approximately $206 million to revenue requirements for base rates. The following components of the need for an adjustment combine to exceed the requested increase, which means cost cutting and growth are reducing some of the need for a rate increase.

Specifically, PEF has the following needs for more revenue:

(1) The 516 MW Hines 2 and 516 MW Hines 3 power plants need to be

added to rate base.

(2) Fossil fuel dismantlement expenses have increased.

(3) PEF needs to add about $50 million per year to its depleted storm reserve fund, while current base rates provide for only about $6 million per year.

Q. These factors justify more revenue. How does this affect your views related to authorized ROE?

A. As I have explained, the final result is what matters. Higher ROEs, thickening the equity share, improved recovery of capital expenses and other reserves are all factors that combine to determine the need and size of a revenue increase.

In that respect, there is not much gained by using any of these factors to increase the target levels of the others. If we get them each right, we would have a reasonable combined result. That seldom happens. Therefore, I find it useful to discuss them collectively.

More important, investors and utility analysts review and effectively grade states and utilities. One factor is often paramount. That factor is the authorized ROE. For this reason, I believe that PEF's significant and important reasons for rate relief need to be considered when this Commission sets a new ROE for PEF.

Furthermore, authorized ROEs need to be considered in the context of how likely the authorized ROE will be achieved. Here, utility performance and the regulatory cost recovery of these other factors become important. In effect, ROE

cannot be divorced and isolated from these other significant revenue requirements and related factors.

Q. How might consumers benefit by setting PEF's ROE at the high end of just and reasonable?

A. This would help to hold or improve PEF's financial position. This would help to control PEF's cost of long-term debt. A strong investment grade status means a lower cost of debt, a better chance of attracting capital, and could make other cost savings available to PEF. Lower debt interest rates benefit consumers. This is especially true when one considers the capital costs that PEF will be incurring to meet the needs of a growing customer base, maintaining superior service that customers have come to expect and demand, and meeting its obligations under the EPA's new environmental requirements. Any reduced cost of financing these capital costs will benefit customers for decades to come.

Q. How does the restructured versus non-restructured states dichotomy affect authorized ROEs?

A. In the past decade, many states, such as California, restructured and moved from traditional cost of service regulation to a competitive environment. The impetus to restructure was a perceived failure of traditional cost of service regulation to keep prices to reasonable levels. When California began its restructuring efforts in 1996, its prices were about twice the national average. Today, average electricity prices in California are three times the national average. Other states, such as

Florida, adopted a "wait and see" strategy. Unlike California, these states did not jettison traditional cost-of-service approaches despite external pressures to do so. Nevertheless, investor impression of the utility sector, as a whole, is colored by the failed attempts at restructuring, even in jurisdictions, such as Florida, that retained traditional cost-of-service approaches.

Q. What are you suggesting?

A. First, I think that it is important that, when setting PEF's authorized ROE, the Commission should focus on utilities located in jurisdictions that, like Florida, have retained traditional cost-of-service approaches and where utilities are expected to continue to make large scale infrastructure investments to serve their native load customers. In particular, states like Georgia and Wisconsin are most similar to Florida in regulatory approach. Utilities located in these states, like PEF, continue to invest in rate base generation and enter into long-term PPAs to reduce customer risk and hedge volatile energy markets. Consequently, PEF will be competing with these utilities for the capital needed to build that new generation and infrastructure. Thus, the way in which the public utilities commissions in these other non-restructuring states are setting ROEs for the utilities within their respective jurisdictions, including incentive programs and accounting treatment, should be very relevant to this Commission in deciding the authorized ROE and capital structure that will allow PEF to effectively compete and attract limited capital at a reasonable cost to finance infrastructure investments for the benefit of its customers.

Q. Do other non-restructuring jurisdictions typically have performance-based or other incentive ratemaking plans?

Performance-based and incentive plans are fairly common in other non-restructuring jurisdictions. For example, Georgia Power for several years has had a sharing plan that authorizes it to earn an ROE within a specified band. This band has been capped at 12.95%.[5] This 12.95% is, in effect, its authorized ROE target. If Georgia Power earns above that authorized 12.95%, it shares the excess earnings with its customers. The sharing mechanism provides Georgia Power with the incentive to cut costs so as to increase its earnings. The Georgia Public Utilities Commission has frozen Georgia Power's retail rates within an ROE band with the very real potential for Georgia Power to exceed that ROE, thereby benefiting both customers (through rate reductions) and shareholders. Consider Table 10, below. Here, I show that the average top of the neutral band ROE is 13.35% for states that retain traditional utility investments and have a strong positive performance-based rate (PBR) incentive to invest and keep costs under control.

TABLE 10
PBR POST-2001

COMPANY	STATE	OPERATION SUBJECT TO PBR	RATE ADJ. PROVISIONS AND INCENTIVES	ROE NEUTRAL BAND	RESTRUCTURIN(
Alabama Power	Alabama	Electric	Rate Stabilization	13.0-14.5	No
Georgia Power	Georgia	Electric	Rate Freeze	10.25-12.25	No
Mid American	Iowa	Electric	Rate Freeze	12.0-14.0	No
Northern States	North Dakota	Electric	Rate Freeze	11.0-13.0	No
Otter Tail	North Dakota	Electric	Rate Freeze	11.0-13.0	No
		Average Top of Neutral Band ROE	**13.35**		

[5] The Georgia Commission in 2004 reset the earnings band with a range of 10.25% to 2.25%, as shown in Table 2.

While PEF is not suggesting a performance based sharing mechanism be implemented at this time, the 50 basis point adder for PEF's superior performance accomplishes the same incentives, and as I described above, would be a good approach for PEF.

Q. Why is it necessary to add incentives in the form of a 50 basis point adder to the ROE to traditional regulation?

A. It has been my experience that people respond to challenges and seek rewards, as well as work to avoid losses. More important, it has been shown to yield benefits that exceed inherent costs. It is something I have advocated and practiced since my days on the Public Service Commission of Wisconsin. In this case, there are six specific reasons that support my conclusion that adding 50 basis points to Dr. Vander Weide's recommended 12.3% ROE is justified. Those several reasons are:

- There is precedent in Florida to consider significant factors that are <u>not</u> reflected in the traditional formulistic methods used to determine the cost of capital.
- As a former regulator, I used such regulatory judgment to select the authorized ROE for a specific utility. The precise point along a just and reasonable range (12% to 13.5% at the time and a tighter 13.0% to 13.5% ROE for electric utilities since they had greater additional capital requirements) is based upon non-traditional factors related to specific utility performance and its degree of cooperation with the Commission.
- PEF's overall performance with respect to controlling costs and

accommodating growth, its innovation, and pro-consumer stance place it in a position that fully justifies an additional 50 basis points for ROE and a thicker equity ratio.

- Adjusting for storm damage and other developments, PEF has been earning about 13.3% on equity on a corrected basis. Dr. Vander Weide proposes a 12.3% rate using traditional cost of capital methods. In states that split or share savings, it would be typical for half of the 100 basis point differential between the just and reasonable target of 12.3% and 13.3% adjusted to be split 50/50 between shareholders and consumers. This reasoning would also support the 50 basis point adder that I recommend in this proceeding.
- In effect, agreeing to a 12.8% ROE and thicker equity structure would generate cash and earnings at the PEF level. This would enable PEF to improve the quality of service, to expand efficiency, to accommodate growth, and to continue to provide superior performance.

Q. What precedent is there in Florida for considering factors that are not reflected in the traditional formulistic methods used to determine the cost of capital?

A. In approving a regulatory incentive plan for Gulf Power Company, the Commission set the midpoint of the sharing band at 11.5%, 50 basis points higher than the midpoint it set for FPL. The Commission took this action, which it said "fairly considers Gulf's performance" to reflect Gulf Power's "lower rates,

reliability, customer satisfaction and its relatively low equity ratio."[6] In that decision, the Commission also discussed early actions taken in 1990 where it had penalized Gulf Power 50 basis points on its ROE for mismanagement.[7] The Commission has both rewarded and penalized utilities based on factors outside the traditional cost of capital analysis. In fact, when I was sitting on the PSCW, I took similar action.

Q. What actions did you take as a regulator on the PSCW?

A. Just as this Commission has done in Florida, when I was the Chair of the Public Service Commission of Wisconsin, I firmly believed that utilities with superior performance should be rewarded and provided with incentives to continue their superior efforts. I also believed in symmetric regulation. Thus, I penalized utilities whose performance was inferior. At the time, ROEs in Wisconsin were routinely set at 13.0%. I broke this tradition when I first rewarded Wisconsin Electric Power Company's superior performance (which included embracing tariff reforms that benefited consumers, cooperation with the Commission and its Staff, reduction and elimination of unnecessary costs, and a well managed and healthy utility) by adding 25 basis points to its authorized ROE.[8] I subsequently "rewarded" Wisconsin Power and Light with an ROE of 13.5%, representing 50

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[6] *In re: Investigation into the earnings and authorized return on equity of Gulf Power Company,* 1999 Fla. PUC Lexis 915, 99 FPSC 5:305 (May 24, 1999).

[7] *In re: Petition of Gulf Power Company for an Increase in its Rates and Charges,* 1990 Fla. PUC LEXIS 1320, 120 PUR 4th 1, (October 3, 1990).

[8] *Findings of Fact and Order re Application of Wisconsin Electric Power Company for Authority to Increase its Electric Rates,* 1979 Wisc. PUC LEXIS 45, (March 6, 1979).

basis points over the previous 13% floor.[9] Subsequently, I set the ROE for Madison Gas & Electric at 13%[10], reflecting no adder for superior performance. Consequently, I wholeheartedly endorse the approach taken by the Commission here in Florida. I think that rewarding exemplary utility performance is an extremely effective way in which to encourage the utility to continue with its efforts for the customers' benefit. Thus, I conclude that PEF should be at the higher end of the just and reasonable range for ROE, which I estimate to be 12.8% using Dr. Vander Weide's starting point of 12.3% and adding 50 basis points for superior performance.

Q. Were your efforts successful?

A. Yes. When I left the Public Service Commission of Wisconsin, the major electric utilities were AAA rated. The Wisconsin utilities still maintain A ratings to this day, twenty-five years later. Further, compared to neighboring states, Wisconsin customers enjoyed the lowest cost of service and some of the highest quality of service.

Q. How does PEF's record with respect to controlling costs while accommodating the growth in its service territory affect your recommendations?

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[9] *Application of Wisconsin Power and Light Company, as an Electric and Water Utility, to Increase Electric and Water Rates,* 64 Wis PSC 57, (Decision No. 6680-WR-5) (February 8, 1980).

[10] *Application of Madison Gas & Electric Company for Authority to Increase its Electric and Natural Gas Rates*, 64 Wis PSC 115 (Decision No. 3270-UR-9) (February 14, 1980).

A. I have discussed how PEG's econometric analysis demonstrated that PEF's actual costs are 12.7% lower than the costs predicted by PEG's proprietary model. PEF's internal benchmarking analysis also demonstrated PEF's superior performance in controlling and reducing its costs while still accommodating the growth in its customer base. It accomplished all of this while maintaining safe and reliable service. These are the types of extraordinary performance that warrant the type of reward that the Commission provided to Gulf Power and that I authorized for superior utilities when I was a Commissioner in Wisconsin.

Q. Please review your reasoning on adding a 50 basis point adder in this conservative state context based on PEF's actual current return on equity.

A. Dr. Vander Weide recommends an ROE based on a traditional cost of capital analysis and a typical regulatory approach. By traditional regulatory approach, I mean that there is no built-in sharing mechanism as in some states, like Georgia, that have retained a traditional regulatory structure. In those states, there is typically a 100 basis point deadband around the ROE that is authorized. The utility will typically keep any earnings that are within 50 basis points above its authorized ROE. Any earnings above that deadband will typically be shared between the customers and shareholders based on a formula. Here, Dr. Vander Weide's analysis suggests a just and reasonable ROE of 12.3%. The Company is currently earning a storm adjusted ROE of 13.3%. It would be reasonable to split the difference between the authorized and actual between customers and shareholders on a 50/50 basis. This split is equal to 50 basis points. Further, the cost associated with such a 50 basis point adder amounts to $15-$20 million (based

on a rate base of $4 billion). This is a small portion of the cost savings associated with PEF's performance in achieving costs that were 12.7% below or nearly $400 million below those predicted for PEF using our proprietary model of the utility industry.

VII. Conclusions

Q. How would consumers benefit from the proposals you support?

A. I propose that the Commission authorize an ROE of 12.8% and capital structure with (55% equity). This Commission action would likely enable PEF to reduce financial risk and would likely save consumers money in the long run.

PEF also purchases power under long-term contracts. This is likely to expand. Favorable terms and conditions for consumers are more likely when the buyer has relatively strong financial health.

These are just some of the reasons why successful utilities often have superior financial health and efficient performance. Qualitatively, treating shareholders well can often inure to the benefit of consumers.

Q. Have you quantified these benefits to consumers?

A. Yes. Although I focused primarily on qualitative benefits, I described the quantitative benefits to customers that are achieved when PEF beats its predicted costs (in the econometric analysis) by 12.7%, to be about $396.3 million in savings for ratepayers based upon the three-year composite comparison.

Q. Please review your conclusions.

A. I have reached several conclusions. First, it is crucial that PEF's outstanding job since the merger in achieving merger related savings and other cost cutting efforts be recognized. The effects of these efforts are demonstrated by both the internal and external statistical benchmarking analyses. PEF has improved when measured against itself (in pre-merger guise) or against its peer companies. However, this effort is mid-stream. PEF must be provided with the necessary incentives to continue with its efforts. Customers have already reaped the benefits of the merger through a $125 million annual rate reduction. A rate increase is now needed to account for new generation being placed in rate base and to restore the storm reserve fund.

With that overarching policy matter firmly in mind, I conclude that the 12.3% ROE recommended by Dr. Vander Weide is a reasonable floor, to which the Commission should add 50 basis points to reward PEF for its superior performance and encourage it to continue its efforts. Thus, I conclude that an ROE of 12.8% is appropriate.

Further, in keeping with the general regulatory flavor of providing an incentive for the Company to continue along its current path, I support Dr. Vander Weide's recommended 45/55 equity ratio. Further, I conclude that PEF's approach to include purchase power costs as part of the debt component should be implemented here because these costs are analogous to debt that would be incurred if PEF financed and built power plants to provide the power received under these purchase power contracts.

It is important to keep in mind the fact that PEF is located in a traditional state that has eschewed deregulation. As my statistical analysis demonstrates, PEF is a superior performer with respect to cost levels and also needs to invest in infrastructure to serve its expanding, primarily residential, customer base. PEF, as others have shown, has also improved the quality of its service and its reliability performance. PEF should be rewarded with an authorized ROE at the higher end of the range of reasonable ROEs. Further, PEF's superior performance should be recognized by adding 50 basis points to the ROE authorized by the Commission. This should be coupled with a 45% debt, 55% equity capital structure.

By doing these forward looking things, the Commission can help ensure that PEF is able to attract capital at reasonable prices to finance its infrastructure improvements. By so doing, the Commission will be providing long-term customer benefits that will last 30 years or longer. Such regulatory treatment will also ensure that savings associated with the merger, other cost cutting benefits, and safety and reliability improvements will continue to be made. In adopting such a reasonable regulatory treatment, the Commission will provide benefits to both customers and shareholders, a symmetry that is required for the continued success of the Company and the welfare of its customers.

Q. Does this conclude your testimony?

A. Yes.

APRIL 2005

CHARLES J. CICCHETTI

PROFESSIONAL EXPERIENCE

1998-present	Jeffrey J. Miller Professor in Government, Business, and the Economy, University of Southern California;
1996-present	Co-Founder, Pacific Economics Group;
1990-1997	Adjunct Professor of Economics, University of Southern California;
1992-1996	Managing Director, Arthur Andersen Economic Consulting;
1991-1992	Co-Chairman, Putnam, Hayes & Bartlett, Inc.;
1988-1991	Managing Director, Putnam, Hayes & Bartlett, Inc.;
1987-1990	Deputy Director, Energy and Environmental Policy Center, John F. Kennedy School of Government, Harvard University;
1984-1987	Senior Vice President, National Economic Research Associates;
1980-1984	Co-Founder and Partner, Madison Consulting Group;
1979-1986	Professor of Economics and Environmental Studies, University of Wisconsin-Madison;
1977-1979	Chairman, Public Service Commission of Wisconsin, Appointed by Governor Patrick J. Lucey (member until 1980);
1975-1976	Director, Wisconsin Energy Office and Special Energy Counselor for Governor Patrick J. Lucey, State of Wisconsin;
1974-1979	Associate Professor, Economics and Environmental Studies, University of Wisconsin-Madison;
1972-1974	Visiting Associate Professor, Economics and Environmental Studies, University of Wisconsin-Madison;
1972	Associate Lecturer, School of Natural Resources of the University of Michigan;
1969-1972	Resources for the Future, Washington, D.C.;
1969	Ph.D., Economics, Rutgers University;
1968-1969	Instructor, Rutgers University;
1965	B.A., Economics, Colorado College;
1961-1964	Attended United States Air Force Academy.

EDITORIAL BOARDS

Journal of Environmental Economics and Management;
Energy Systems and Policy, Former Member;
Land Economics, Former Editor.

ADVISORY BOARDS

Alliance for Energy Security;
Association of Environmental and Resource Economics, Executive Committee, Former Member;
Association of Environmental and Resource Economics, Contributing Members Program Committee;
California ISO Market Advisory Group – appointed by Governor Gray Davis;
Center for Public Policy Advisory Committee, Former Member;
Department of Energy, Fuel Oil Marketing Advisory Committee, Former Member;
Graduate School of Public Policy at the University of California, Berkeley;
Institute for the Study of Regulation;
National Association of Regulatory Utility Commissioners, Executive Committee and Chairman of the Ad Hoc Committee on the National Energy Act, Former Member;
New Century Land Renewals;
Public Interest Economics Center, Board of Directors, Former Member;
Rutgers University, Energy Research Advisory Board;
U.S. Chamber of Commerce Energy and Natural Resources Committee.

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