

BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

In the Matter of

PETITION FOR RATE INCREASE BY
FLORIDA POWER & LIGHT COMPANY.

DOCKET NO. 050045-EI

2005 COMPREHENSIVE DEPRECIATION
STUDY BY FLORIDA POWER & LIGHT
COMPANY.

DOCKET NO. 050188-EI

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VOLUME 2

Pages 41 through 235

PROCEEDINGS: HEARING

BEFORE: CHAIRMAN BRAULIO L. BAEZ
COMMISSIONER J. TERRY DEASON
COMMISSIONER RUDOLPH "RUDY" BRADLEY
COMMISSIONER LISA POLAK EDGAR

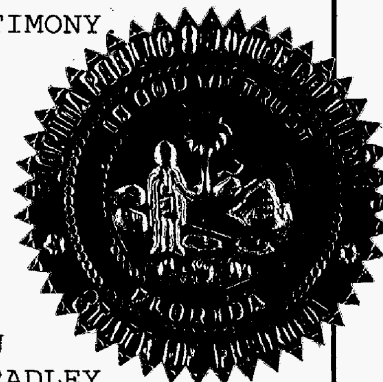
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TIME: Commenced at 9:55 a.m.

PLACE: Betty Easley Conference Center
Room 148
4075 Esplanade Way
Tallahassee, Florida

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(850) 413-6734

APPEARANCES: (As heretofore noted.)



DOCUMENT NUMBER-DATE

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BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

FLORIDA POWER & LIGHT COMPANY

DIRECT TESTIMONY OF ARMANDO J. OLIVERA

DOCKET NO. 050045-EI

MARCH 22, 2005

1
2
3
4
5
6
7 **Q. Please state your name and business address.**

8 A. My name is Armando J. Olivera. My business address is Florida Power & Light
9 Company, 700 Universe Boulevard, Juno Beach, Florida 33408-0420.

10 **Q. By whom are you employed and what is your position?**

11 A. I am employed by Florida Power & Light Company (FPL or the Company) as
12 President.

13 **Q. Please describe your duties and responsibilities in that position.**

14 A. I have overall responsibility for the operations of the Company.

15 **Q. Please describe your educational background and business experience.**

16 A. I have a Bachelor of Science degree in electrical engineering from Cornell
17 University and a Master of Business Administration from the University of
18 Miami. I am also a graduate of the Professional Management Development
19 program of the Harvard Business School. I was named President of FPL in 2003.
20 My professional background is described in more detail in Document No. AJO-1.

21 **Q. Are you sponsoring an exhibit in this case?**

22 A. Yes. I am sponsoring an exhibit consisting of one document, AJO-1, which is
23 attached to my direct testimony.

1 **Q. Are you sponsoring or co-sponsoring any MFRs in this case?**

2 A. Yes, I am co-sponsoring the following MFR:

3 C-18, "Lobbying Expenses, Other Political Expenses and Civic/Charitable
4 Contributions."

5 **Q. What is the purpose of your testimony?**

6 A. The purpose of my testimony is to introduce the witnesses who have filed
7 testimony on FPL's behalf, and to provide an overview of the Company's filing
8 and its position in this case.

9 **Q. Please identify FPL's witnesses and summarize the purpose of the testimony
10 filed on FPL's behalf in this proceeding.**

11 A. The testimony submitted by the other witnesses on behalf of FPL in this
12 proceeding is offered to explain and support:

13 1) FPL's Minimum Filing Requirements (MFRs) which demonstrate the need for
14 an increase in base rates for 2006;

15 2) The 2007 Turkey Point Unit 5 Adjustment schedules and FPL's 2007 Forecast
16 schedules that reflect the need for a further base rate increase in 2007 to take into
17 account the completion and placement into service of Turkey Point Unit 5;

18 3) An authorized rate of return on equity (ROE) based on a midpoint of 12.30
19 percent which includes a performance incentive of 50 basis points;

20 4) Adjustments that the Florida Public Service Commission (FPSC or the
21 Commission) requires the Company to make or should allow to be made in
22 establishing FPL's rates; and

1 5) The proposed rate schedules that implement the requested rate relief and which
 2 improve the differences among the rates of return of various rate classes.

3
 4 Following is a listing of the Company's witnesses and the areas addressed in the
 5 testimony of each of those witnesses:

- 6 • Moray P. Dewhurst – Need for requested revenue increase, ROE, capital
 7 structure, adjustment to ROE to reflect superior performance, insurance costs
 8 and storm fund requirements;
- 9 • K. Michael Davis – Calculation of the 2006 and 2007 revenue requirements
 10 and requested revenue increase, accounting issues and Company adjustments;
- 11 • Leonardo E. Green, Ph. D. – Sales and load forecast;
- 12 • J. A. Stall – Nuclear cost and performance;
- 13 • William L. Yeager – Power Generation cost and performance and new
 14 generation capital and operating costs;
- 15 • C. Martin Mennes – Power Systems Transmission cost and quality of service;
- 16 • Geisha J. Williams – Power Systems Distribution cost and quality of service;
- 17 • Marlene M. Santos – Customer Service cost and quality of service;
- 18 • Robert H. Escoto – Human Resources costs and benefits;
- 19 • John H. Landon, Ph. D., Analysis Group Inc. – FPL's operational and
 20 financial performance relative to industry benchmarks;
- 21 • Solomon L. Stamm – FPL's financial forecast;
- 22 • Michael E. Barrett, Ernst & Young, LLP – Independent review of FPL's
 23 forecast and validity of forecasting methods and results;

- 1 • Steven P. Harris, ABS Consulting – Storm reserve;
- 2 • William E. Avera, Ph. D., Financial Concepts and Applications, Inc. – ROE,
- 3 capital structure and adjustment to ROE to reflect superior performance; and
- 4 • Rosemary Morley – Cost of service and rate design.

5 **Q. Please summarize the Company's position in this case.**

6 A. FPL has worked extremely hard over the years to avoid a base rate increase while
7 providing safe and reliable electric service. At the same time, FPL has invested
8 billions of dollars in new generating facilities, transmission lines, distribution
9 lines and other infrastructure necessary to meet huge increases in demand for
10 electricity associated with Florida's burgeoning population and expanding
11 economy. FPL's accomplishments in this respect have been remarkable. As Ms.
12 Morley discusses, FPL has reduced base rates in the last six years by \$600 million
13 per year, and provided customers additional refunds of more than \$200 million,
14 for total savings of nearly \$4 billion (through the end of 2005). Mr. Yeager's
15 testimony reflects that FPL has been able to successfully defer the need for new
16 generating units by improving the performance and availability of the Company's
17 existing fossil fleet. Ms. Williams addresses the superior reliability, customer
18 service and effective cost management provided by the Distribution business unit.
19 And Mr. Stall's testimony reflects that FPL's performance in operating its nuclear
20 units has ranked among the best in the U.S.

21
22 We are proud of our record in these and other areas and, therefore, do not take
23 lightly the decision to request an increase in base rates. However, as Dr. Green

1 describes, the needs of FPL's customers for electricity have dramatically
2 expanded since 1985, the last time FPL sought an increase in its base rates. Since
3 1985, FPL has added 1.6 million new customers. Further, customer usage itself
4 has increased, with today's residential customer consuming approximately 30%
5 more electricity on average than a customer in 1985, even taking into account the
6 efficiency improvements in today's household appliances and other electronic
7 devices. As Mr. Stamm testifies, FPL has invested more than \$18 billion in new
8 plant and infrastructure to meet these growing needs. It is this continued growth
9 in the demand for electricity and the infrastructure needs associated with meeting
10 that growth in the manner customers expect that require the Company to seek
11 such an increase at this time -- the first such request in 20 years.

12
13 In establishing an appropriate rate of return for FPL, the testimonies of Dr. Avera
14 and Mr. Dewhurst reflect that a fair ROE is 11.8%. This assessment is based on
15 the various capital market oriented analyses described in Dr. Avera's testimony,
16 and also considers the potential exposures faced by FPL as well as the economic
17 requirements necessary to maintain access to capital even under adverse
18 circumstances. In addition, the Commission should also consider FPL's
19 significant accomplishments in meeting sustained customer growth with safe,
20 reliable, and reasonably priced electric service. As discussed in the testimony of
21 several FPL witnesses, the Company's performance has been strong over an
22 extended period, and in many instances it has been among the very best in the
23 industry. To recognize the superior performance that FPL has provided and

1 continues to provide, and to send an appropriate message that such performance
2 will be rewarded, thus encouraging continued efforts to maintain operational
3 excellence and efficiencies, the Commission should provide FPL a performance
4 incentive in the form of 50 additional basis points to the midpoint and the range of
5 the Company's authorized ROE; specifically, the Commission should establish a
6 midpoint of 12.3% with a range of 11.3% to 13.3%.

7
8 Because of FPL's strong track record and continued commitment to provide safe
9 and reliable electric service at reasonable rates, even with the requested base rate
10 increases in 2006 and 2007, FPL's base rates will remain below what they were in
11 1999 prior to making the first of two significant base rate reductions, and, in fact,
12 below what they were in 1985, the last time FPL's base rates were increased.

13 **Q. What specific rate relief is the Company requesting?**

14 A. FPL is requesting an increase in base rates effective January 1, 2006, to address
15 the need for additional annual base revenues of \$385 million. The testimony of
16 Mr. Davis reflects that this amount is net of adjustments made to the recovery of
17 certain costs in the capacity and fuel cost recovery clauses. Thus, as Mr. Davis
18 explains, the total requested increase, taking into account the effect of these
19 proposed company adjustments on the clauses, is \$430 million. FPL also is
20 requesting a further base rate adjustment in 2007 to produce an additional \$123
21 million (on an annualized basis) effective upon Turkey Point Unit 5 being placed
22 in service, currently projected to occur June 1, 2007. The testimony of Mr. Davis
23 explains the calculation of the requested increases and adjustments.

1 Summarized below are the significant cost drivers that have resulted in the need
2 for an increase at this time. These and other areas will be addressed by various
3 witnesses in this case, but the following list provides a sense of the scope of issues
4 and challenges the Company faces:

- 5 • The addition of the new Martin and Manatee fossil generating units in
6 2005 and Turkey Point Unit 5 in 2007;
- 7 • Nuclear plant upgrades including the reactor vessel head replacements at
8 St. Lucie and Turkey Point;
- 9 • Transmission and Distribution infrastructure needed to serve new
10 customer growth and maintain reliability;
- 11 • Increase in the storm reserve accrual;
- 12 • Implementation of a peninsular Florida Regional Transmission
13 Organization (RTO); and
- 14 • Increases in employee benefit costs such as healthcare.

15 **Q. How long has it been since FPL last received a base rate increase?**

16 A. FPL's last increase was in 1985; thus, it will have been over 20 years since FPL
17 last increased base rates until the requested increase takes effect in January 2006.
18 In fact, as Ms. Morley testifies, FPL's current retail base rates are 16% lower than
19 they were in 1985, the last time its base rates were increased, while consumer
20 prices as measured by the Consumer Price Index have increased over 80% during
21 the same period.

1 **Q. How has the Company's service environment changed since 1985?**

2 A. As Dr. Green testifies, the state of Florida has seen significant growth over the
3 past twenty years, and likewise the Company has also experienced tremendous
4 customer and load growth since its last base rate increase in 1985. During the last
5 20 years, the Company has added 1.6 million new customers, an increase of more
6 than 61%. During this same time frame, total annual peak load increased by 64%
7 while customer kilowatt-hour (kWh) energy usage and summer peak kilowatt
8 (kW) demand both grew by an astounding 93%. As Ms. Williams testifies, every
9 year since 2002 FPL has added in excess of 100,000 customers, the size of an
10 entire small utility. Dr. Green also states that in 2004 alone, FPL's customers set
11 not just one, but six all-time peak records for electricity use on the Company's
12 system.

13

14 This major change in the scope of the Company's obligation to serve, moving
15 from a point at which FPL was serving 2.6 million customers in 1985 to meeting
16 the needs of 4.2 million customers in 2004, has required an enormous
17 commitment of resources and capital. To put this in perspective, consider that, as
18 Dr. Landon testifies, there are only 12 electric utilities in the United States other
19 than FPL that have 1.6 million or more customers (as of 2003). Essentially,
20 therefore, since 1985 FPL has added to its system the equivalent of one of the
21 nation's largest electric utilities. In order to support this tremendous increase in
22 its customer base, Mr. Stamm's testimony reflects that the Company has invested
23 over \$18 billion in capital expenditures to increase its capability to service

1 Florida's growing needs, including \$3 billion in the construction of new
2 generating capacity and \$8 billion in the expansion of FPL's transmission and
3 distribution system. At the same time, the Company has made tremendous strides
4 in productivity and decreased base rates. By any measure, this is a remarkable
5 achievement.

6
7 The significance of this achievement is also evident when you compare the most
8 recent twenty years (1985 - 2004) to the prior twenty-year period (1966 - 1985).
9 As Dr. Green testifies, during each of the twenty-year periods, FPL added
10 approximately the same number of customers (i.e., 1.6 million). During the 1966
11 - 1985 time period, FPL required eight different base rate increases totaling over
12 \$1.1 billion. However, during the most recent twenty years and while adding
13 approximately the same number of customers, the Company did not request a
14 single base rate increase. In fact, the Company reduced base rates 3 times during
15 this time period. This is a truly remarkable accomplishment, and one which has
16 ultimately benefited customers.

17
18 **ACTIONS TAKEN TO AVOID THE NEED FOR AN INCREASE**

19 **Q. What actions has FPL taken in order to avoid the need for a base rate**
20 **increase?**

21 **A.** As Ms. Morley testifies, over the past twenty years FPL has not only avoided a
22 retail base rate increase but has actually substantially lowered its retail base rates
23 despite having made massive capital investments to meet the needs of a rapidly

1 growing customer base. Various other witnesses will testify that FPL has
2 improved efficiency and performance in all major areas of operations on an
3 electric system that today serves an annual peak load of more than 20,500
4 megawatts (MW) compared to 12,500 MW served in 1985, an enormous increase
5 in system requirements.

6 **Q. Please describe in more detail some of FPL's actions and the resulting**
7 **achievements that have enabled the Company to avoid a base rate increase**
8 **since 1985.**

9 A. As Mr. Yeager testifies, the performance of FPL's generating units has been a
10 major contributor to FPL's ability to control its base rates. The Company has
11 substantially improved the performance and availability of its existing generating
12 units, thus deferring the need for new capacity. Mr. Yeager indicates in his
13 testimony that FPL's fossil plant Equivalent Availability Factor (EAF)
14 performance improved dramatically from 1990 to 2004. In 2003 (the latest year
15 for which industry data are available), FPL's fossil fleet EAF was 90.1%, which
16 was better than the industry average EAF of 84.9%. FPL's fossil EAF
17 performance has been "Best-In-Class" for five out of the last six years since 1998,
18 throughout the terms of the two revenue sharing plans approved by the
19 Commission. Overall, as Dr. Landon states, FPL's fossil plants demonstrated
20 superior performance, relative to the benchmark group.

21
22 Another key to lower base rates has been the initiative and effort of FPL's
23 management and employees to control the Company's O&M expenses. From

1 1985 to 2003 the Company succeeded in lowering its non-fuel O&M expenses per
2 kWh by approximately 29%, while the number of customers served increased by
3 57%. During the decade of the 1990s, FPL actually reduced total annual non-fuel
4 O&M levels by over 15%. As Mr. Stamm discusses, FPL's 2006 O&M
5 expenditures will be more than \$800 million, or 35%, below the Commission's
6 benchmark amount when compared to 1988 O&M levels.

7
8 Since agreeing to a \$250 million base rate decrease in 2002, FPL has continued to
9 pursue efficiency improvements and control costs in all aspects of its operations.
10 For example, as Mr. Escoto testifies, FPL's annual rate of increase in healthcare
11 costs has been held to well below the national average of 14% in 2003 and 2004.
12 FPL has been successful in maintaining its rate of increase below the national
13 average, however, we expect total annual healthcare costs in 2005 and beyond to
14 increase at a rate nearer to that of the forecasted national trend, which is in the
15 range of 13% per year.

16
17 In the Power Systems Distribution business unit, Ms. Williams testifies regarding
18 the distribution reliability program which has had very impressive results. Since
19 1998, FPL has reduced customers' average annual outage time by 30%. In
20 addition, based on the Edison Electric Institute's (EEI) 2003 Reliability Report,
21 FPL's Distribution performance ranks among the industry leaders and is 50%
22 better than the industry average. Since 1998, the Distribution business unit also

1 has reduced the average number of outages (frequency) by more than 20% and
2 has reduced average restoration time (duration) by more than 10%.

3
4 As Mr. Mennes testifies, FPL's Power Systems Transmission and Substation area
5 has also improved its quality of service to customers. His testimony reflects that
6 average transmission/substation interruption time improved by over 60% from
7 1998 to 2004. Further, FPL's Transmission and Substation operations
8 performance was recently assessed by a National Electric Reliability Council
9 (NERC) audit arising out of the August 2003 Northeast blackout. The findings
10 were very positive, including a recommendation that several FPL practices be
11 adopted as "best practices" for other NERC members.

12
13 As Mr. Stall testifies, FPL's nuclear plants have historically been a source of
14 reliable, safe and cost effective energy for FPL's customers. The Nuclear
15 Division's performance in the areas of nuclear safety and reliability has been a
16 key factor in the Company's success, which in turn has enabled the Company to
17 receive renewed operating licenses for all four nuclear units ensuring that they
18 will continue to serve our customers well into the future.

19
20 The testimony of Ms. Santos reflects that FPL's Customer Service business unit
21 provides customers with superior service. For example, FPL was recently
22 awarded the Service One Award by PA Consulting Group. This award recognizes
23 utilities that provide exceptional service to their customers based on a set of 18

1 different measures of excellence in the customer care area. FPL also was the first
2 electric company in the nation to have its customer care centers certified as a
3 Center of Excellence by Purdue University's Center for Customer Driven Quality.
4 In 2000, FPL's customer care center was recognized as the top ranked center in
5 the META Group benchmarking study. Overall, since 1985, FPL's Customer
6 Service operations have been significantly enhanced to serve customers more
7 effectively and efficiently while achieving an industry-leading overall quality of
8 service.

9 **Q. How does FPL's performance compare to the industry?**

10 A. FPL has performed very well relative to the industry as addressed by Dr. Landon,
11 who was asked by FPL to assess the Company's operational and financial
12 performance relative to industry benchmarks. Following is a summary of Dr.
13 Landon's results as discussed in his testimony.

- 14 • The benchmarking shows that FPL has been successful in reducing non-
15 fuel O&M expenses per customer between 1998 and 2003, and that it has
16 performed significantly better than the benchmark group in this regard.
- 17 • FPL's total non-fuel O&M expenses per customer declined from 1998 to
18 2003 and were 41% lower than the benchmark group over that six-year
19 period, while O&M expenses per customer for the benchmark group
20 increased during this time frame. FPL's non-fuel O&M expenses per
21 customer are consistently well below the average for the comparison
22 group throughout the six-year comparison period -- strong evidence of
23 FPL's consistent record of success in controlling non-fuel O&M expenses.

1 FPL's non-fuel O&M expenses were also compared to the benchmark
2 group with the expenses normalized on the basis of kWh sales rather than
3 the number of customers, and again, FPL compares very favorably. On
4 average, FPL's non-fuel O&M expenses per kWh were 22% lower than
5 that of the benchmark group over the six-year period.

- 6 • FPL's success extends back beyond 1998 as well. Beginning in 1991, the
7 first year of a major cost reduction initiative, and continuing through 2004,
8 the Company achieved consistent and substantial reductions in non-fuel
9 O&M expenses. Between 1991 and 2004, FPL's non-fuel O&M expenses
10 per customer have fallen 31%.

- 11 • FPL's performance in controlling capital costs also compares very
12 favorably to the benchmark group. In comparing the gross plant per
13 customer and gross plant per kWh for FPL and the benchmark group over
14 the period 1998-2003, FPL's capital costs are consistently below the
15 benchmark group throughout this period by both measures, suggesting a
16 more efficient employment of capital by FPL relative to the benchmark
17 group.

- 18 • Overall, the Company's benchmarking indicates that it has improved
19 service levels over the past several years and has delivered a higher level
20 of service, on average, than other comparable utilities. At the same time,
21 the Company has reduced both expense levels and capital costs compared
22 to its peers.

1 **Q. How have customers benefited from FPL's actions?**

2 A. FPL's accomplishments have ensured that customers continue to receive safe,
3 reliable electric service while actually seeing significant decreases in their base
4 rates. In fact, as Ms. Morley testifies, taking into account these base rate
5 reductions and the revenue sharing refunds under the terms of the last two
6 revenue sharing plans approved by the Commission, FPL's customers will have
7 realized direct savings of almost \$4 billion as of December 31, 2005.

8
9 While additional examples of FPL's superior performance levels and quality of
10 service are included in the testimony of various other witnesses, the examples
11 mentioned above clearly reflect that FPL has been successful, not just in
12 maintaining, but also in dramatically improving its quality of service to customers
13 in recent years. These improvements have been achieved despite the demands of
14 growth on our operations and during a period in which base rates were not
15 increased, but in fact were reduced by a significant margin. During this same
16 period of time, FPL was able to lower retail base rates two times by a total of
17 \$600 million annually. Clearly, customers have benefited from FPL's efforts.
18 These and other measures, though part of FPL's continual focus to achieve
19 superior performance at below industry average costs, are not sufficient to avoid
20 the need for an increase in base rates. In reality, but for all of these measures,
21 FPL's base rates would have had to increase long before now.

MAJOR FACTORS NECESSITATING AN INCREASE

1
2 **Q. Given FPL's excellent track record of meeting growth without having to**
3 **raise base rates, why is the Company now seeking an increase in base rates?**

4 A. The Company has done a superior job of controlling cost while maintaining and
5 even decreasing base rates since 1985. However, while customer growth in
6 Florida and in FPL's service territory is expected to continue, further operational
7 efficiencies alone will not be sufficient to meet the significant increase in costs
8 the Company is facing over the next several years. Prior to reducing base rates so
9 substantially in 1999 and again in 2002, FPL had been able to meet the increasing
10 number and demands of customers without the need for a base rate increase.
11 Arguably, the \$600 million total base rate reduction resulting from the two
12 revenue sharing agreements has altered what had been a relatively stable
13 relationship between revenue growth and the incremental investment and cost
14 associated with meeting the needs of Florida's growing population and economy.
15 In order to safely and reliably meet the electric needs of existing as well as new
16 customers, an increase in base rates, the first in twenty years for FPL, is necessary
17 at this time. However, the requested increase is less than the total decrease in
18 base rates customers have received since 1999.

19 **Q. Please summarize the major factors, as documented by the Company's filing,**
20 **that support the need for base rate relief in 2006.**

21 A. FPL is responding to Florida's tremendous growth by making significant capital
22 investments in various areas of the Company's operations between 2002, the last
23 year in which base rates were set, and the projected 2006 test year. As Mr.

1 Stamm testifies, electric plant in service (FERC account 101) is forecasted to
2 increase by over \$5 billion from 2002 to 2006. Mr. Stamm and other witnesses
3 explain that three areas in particular will increase significantly over this time
4 frame, as follows:

- 5 • Transmission and Distribution (T&D) - Mr. Mennes and Ms. Williams
6 address the increase in T&D plant in their testimony. For example, Ms.
7 Williams addresses the capital investment needed to meet the impact of
8 adding new customers to our system. She testifies that, every year since
9 2002, FPL has been adding in excess of 100,000 customers, the size of an
10 entire small utility, and that level is forecast to continue through 2006.
- 11 • Other Production Plant - Mr. Yeager addresses the major drivers of this
12 increase in his testimony. FPL's generation fleet is growing to keep pace
13 with customer demand for electricity, and the cost of maintaining that fleet
14 is also increasing.
- 15 • Nuclear Production Plant - Mr. Stall testifies regarding this area. A major
16 driver is the replacement of the reactor vessel heads for St. Lucie Units 1
17 and 2 and Turkey Point Unit 4, which is scheduled to begin in the spring
18 of 2005. Mr. Stall also addresses other areas, such as the long-term spent
19 nuclear fuel storage problem which will have a significant impact on
20 capital as well as O&M.

21
22 In addition to the capital investment directly related to growth and other factors,
23 the Company also is experiencing cost increases in other areas. As Mr. Dewhurst

1 testifies, for many years FPL has been able to hold the line on non-fuel O&M
2 expenses and has achieved admirable performance. However, like most
3 companies, FPL has been facing cost pressures in a number of areas. One such
4 example is double-digit health care cost inflation which, as Mr. Escoto explains,
5 is a national concern in business today. Such cost pressures were reflected in
6 FPL's 2002 non-fuel O&M expenses, and represented the first significant increase
7 in non-fuel O&M in over 10 years. There will continue to be upward pressure on
8 O&M over the next several years due to the cumulative effects of inflation and
9 operational requirements. As Mr. Stamm testifies, total company per book O&M
10 expenses (excluding fuel, purchased power and deferred expenses) are projected
11 to increase \$388 million from 2002 to 2006. The major drivers of the forecasted
12 increases between 2002 and 2006 are addressed by a number of witnesses and are
13 summarized by Mr. Stamm as follows:

- 14 • Administrative & General (A&G) - Two of the major factors in this area
15 are the increase in the annual accrual for storm costs, which will be
16 addressed by Messrs. Dewhurst and Harris, and increased employee
17 benefit costs, which will be addressed by Mr. Escoto. The impact of the
18 annual storm accrual increase alone is approximately \$100 million per
19 year, the amount needed to ensure a reasonable storm reserve level. Based
20 on FPL's experience with Hurricane Andrew in 1992 and with the three
21 hurricanes in 2004, the proper level of the storm reserve is clearly critical.
22 Mr. Dewhurst testifies that, even with this increased accrual, there is still a

1 33% chance that losses will exceed the value of the Storm Damage
2 Reserve over a five year period.

- 3 • Nuclear - Principal cost drivers in the nuclear area include increased
4 regulatory requirements and actions being taken to maintain plant
5 reliability and performance. As Mr. Stall discusses, the aging of FPL's
6 nuclear plants is resulting in an increase in the amount of work necessary
7 to safely and reliably operate the units. In addition, the Nuclear
8 Regulatory Commission has significantly increased regulatory
9 requirements as a result of the Davis-Besse event and also as a result of
10 the events of September 11, 2001. These increased regulatory
11 requirements in turn result in significant increases in the Company's costs.
- 12 • Transmission - This increase is primarily a result of projected costs for the
13 RTO. Mr. Mennes addresses this in his testimony.
- 14 • Steam and Other Production - Mr. Yeager addresses the major drivers of
15 this increase in his testimony. As he discusses, O&M expenses are
16 projected to increase significantly due to the addition of the Martin and
17 Manatee units in 2005. Another factor driving O&M costs higher is the
18 aging of FPL's conventional steam fleet. Mr. Yeager testifies that these
19 units range in age from 23 to 50 years and, as a result, require additional
20 structural and reliability maintenance since many components are at the
21 end of their remaining useful life.

1 While not a comprehensive presentation of the operational and financial hurdles
2 the Company is facing, the above overview reflects the major factors that have
3 necessitated the Company's filing for base rate relief in 2006. These factors are
4 discussed in more detail in the testimony of other witnesses.

5
6 **RETURN ON EQUITY**

7 **Q. What is the appropriate ROE range for the Company in this docket?**

8 A. The testimonies of Dr. Avera and Mr. Dewhurst establish that the range for ROE
9 should be 11.30% to 13.30%, with a midpoint of 12.30%. This range and
10 midpoint include a performance incentive of 50 basis points as recognition of the
11 Company's superior overall performance and to encourage continued
12 performance achievements. As Mr. Dewhurst notes, the proposed ROE range and
13 midpoint assume that the Commission will continue its past policy and practice of
14 allowing the recovery of prudent and reasonable storm restoration costs through
15 base rates or special assessment. FPL is recommending that the Commission
16 approve this midpoint of 12.30% and the corresponding range.

17 **Q. Please summarize why the Company believes the ROE performance**
18 **incentive of 50 basis points is appropriate.**

19 A. As I have described above, and as reflected more fully in the testimony of various
20 other witnesses, FPL has compiled an impressive record of providing superior and
21 reliable electric service. FPL's performance levels generally have been well
22 above industry averages and in many cases have been among the highest in the
23 industry, while at the same time holding base rates at or below 1985 levels. As

1 Mr. Dewhurst testifies, a performance incentive serves to support and encourage
2 FPL management's long-term efforts to continue improvement in quality of
3 service and efficiency of operations, and sends an appropriate signal to public
4 utilities in the state of Florida that superior performance will be recognized and
5 rewarded.

6
7 Noted below are just a few of the significant accomplishments and measures that
8 demonstrate the superior results achieved by FPL in its overall performance, and
9 which we feel the Commission should take into consideration in this proceeding.

10
11 1) The level of FPL's base rates alone is a reflection of FPL's solid performance.
12 Even with the requested increase, FPL's base rates will be lower than those set the
13 last time they were increased twenty years ago. Rather than seeking increases in
14 base rates over the last twenty years, FPL in fact has reduced base rates. In 1999
15 FPL agreed to reduce base rates by \$350 million per year and in 2002 agreed to
16 further reduce base rates by another \$250 million. As Ms. Morley testifies, by the
17 end of 2005 FPL's customers will have received nearly \$4 billion in reduced base
18 rates and refunds as a result of those two rate agreements. This has all been
19 accomplished despite an increase of 1.6 million customers since 1985.

20
21 2) As Mr. Yeager explains in his testimony, FPL's improvements in fossil plant
22 availability and reliability performance over the years have helped defer the need
23 for new capacity. Having high availability also means that the most efficient

1 generating units will be available to operate a greater part of the time, thus
2 minimizing fuel costs which in turn results in customer savings. Mr. Yeager
3 further demonstrates that from 1998 to 2004, total operating costs for the fossil
4 fleet were reduced 23% on a cents per kWh basis while plant availability and
5 reliability performance improved to an industry "best in class" level.

6
7 3) As previously discussed, the testimony of Ms. Santos reflects the superior
8 performance of FPL's customer care centers and the various awards and
9 recognition received as a result of that performance.

10
11 4) Dr. Landon provides an independent assessment of FPL's operational and
12 financial performance relative to industry benchmarks, as well as the resulting
13 benefits that have accrued to customers. He states that the Company's costs are
14 significantly below industry average and have been for many years. For example,
15 FPL's non-fuel O&M expenses per customer were consistently below the average
16 for the comparison group throughout the six-year comparison period. This is
17 strong evidence of FPL's consistent record of success in controlling these
18 expenses. Dr. Landon concludes that FPL has a history of controlling and
19 reducing operating expenses that has persisted for a period of more than 13 years.
20 At the same time that FPL has been successful in keeping its costs low, it also has
21 provided customers with a level of electric reliability that exceeds industry
22 averages. For example, FPL has demonstrated considerably higher distribution
23 reliability relative to the comparison group. Over the most recent three-year

1 period (2001-2003), the benchmark average outage time was 140.9 minutes
2 whereas FPL's average time was only 68.7 minutes, less than half that of the
3 benchmark group average.

4
5 FPL has achieved these superior results as a result of management initiative and
6 employee commitment. In order to encourage the company to continue to achieve
7 such results in the future, I believe the ROE performance incentive is appropriate.

8
9 **2007 TURKEY POINT UNIT 5 ADJUSTMENT**

10 **Q. Why does FPL propose that the Commission grant the Company additional**
11 **base rate relief in 2007 in addition to the relief requested for 2006?**

12 **A.** As Mr. Dewhurst testifies, the addition of Turkey Point Unit 5 represents a known
13 and measurable investment of considerable size that, upon being placed into
14 service in 2007, will represent a significant cost impact for the Company that is
15 incremental to its 2006 cost projections and that will produce an immediate
16 negative impact on earnings. Mr. Dewhurst further explains that FPL proposes to
17 base the amount of the increase on the incremental revenue requirements for
18 Turkey Point Unit 5, resulting in annualized revenue requirements of \$123
19 million. While this adjustment is a conservative proxy for the full increase in
20 revenue requirements that FPL expects for 2007, FPL is prepared to accept this
21 understated measure of the additional rate relief in the interest of administrative
22 efficiency. The approval of the Turkey Point Unit 5 Adjustment, along with the

1 requested rate relief for 2006, would avoid the potential for another full rate
2 proceeding for 2007 immediately following the current review process.

3
4 **OTHER ISSUES FOR CONSIDERATION**

5 **Q. Are there any other issues in this docket that you would like to address?**

6 A. Yes. The issues are 1) the differences in the rates of return (ROR) between FPL's
7 various rate classes and 2) inclusion of certain charitable contributions in base
8 rates.

9 **Q. Please discuss the rate class ROR issue.**

10 A. As Ms. Morley testifies, FPL's proposed rates and rate design include steps that
11 will address the differences between the RORs achieved for various rate classes.
12 Ideally, the revenue for each individual rate class would be set at a level that
13 results in a rate of return index of 100%, i.e., the ROR for each rate class would
14 be equivalent to the overall ROR for the Company. However, that is currently not
15 the case. The RORs for some rate classes are higher than the Company ROR
16 while other rate classes are much lower than the Company ROR. This proceeding
17 provides an opportunity to effect a substantial improvement in the achieved RORs
18 among the various rate classes.

19 **Q. Why is FPL proposing to include charitable contributions in base rates?**

20 A. FPL's commitment to service goes well beyond supplying safe and reliable
21 energy to its customers. By providing civic and charitable contributions, FPL and
22 its employees help improve the quality of life in each of the communities we
23 serve. The Company's support is highly focused toward specific community

1 issues that are directly related to the Company's business objectives that, in turn,
2 ultimately benefit customers.

3
4 Furthermore, as an active partner in the communities we serve, there are
5 expectations by those communities that FPL and other local businesses should
6 provide such support. For other companies, this support is considered as a cost of
7 doing business or a "cost of goods sold," and must be recovered through the price
8 paid by customers for its good and services. FPL's proposal to include such
9 expenses in base rates would reflect like treatment for like expenses.

10
11 FPL's participation in such efforts also provides direct and tangible benefits to the
12 utility's operations and its ability to provide high quality service. Thus, FPL's
13 customers also benefit. For example: 1) Contributions to environmental
14 organizations help to promote a spirit of cooperation between FPL and such
15 groups and also afford FPL the opportunity to have meaningful dialogue and to
16 team with such groups on issues and projects of common concern, including the
17 permitting of new facilities and other matters that affect current operations; 2) The
18 siting of facilities and occasional inconveniences caused by the construction
19 and/or improvement of the Company's infrastructure often are more easily
20 understood in communities where FPL is seen as an active partner and participant
21 in community interests and affairs; and 3) Contributions made to help less
22 fortunate customers, such as the Company's Care-to-Share program, accomplish
23 an important humanitarian objective and also reduce receivables and write-offs.

ALTERNATIVE REGULATION

1
2 **Q. Please discuss how the Commission's alternative approach to regulation in**
3 **recent years has benefited customers.**

4 **A.** The Commission and the Office of Public Counsel in the past have supported FPL
5 in its efforts to continually improve service and manage costs through their
6 willingness to consider and implement progressive approaches to regulation.
7 Incentive-based regulation has been highly effective in producing the intended
8 results, and has provided an incentive to manage expenses as evidenced by FPL's
9 success in measurably lowering its O&M and capital costs over the past decade.
10 In turn, customer savings realized from the 1999 and 2002 revenue sharing
11 agreements will be nearly \$4 billion by the end of 2005. As a result of these
12 progressive policies favoring incentive-based regulation, FPL's customers have
13 ultimately benefited.

14
15 The revenue sharing agreements of the past several years have produced
16 substantial benefits for customers and generally have worked well. However,
17 because of the significant cost pressures in today's environment, agreements
18 structured in the manner in which the two prior agreements were structured are
19 less likely to provide an acceptable frame work going forward. Nevertheless,
20 consistent with past Commission expressions favoring resolution of rate cases
21 through settlement, FPL remains receptive to appropriately structured, alternative
22 regulatory regimes in lieu of traditional ROR regulation that would defer the need
23 for future rate cases, thus avoiding the cost and resource impact on the Company,

1 Commission and other parties, and improving rate stability -- a benefit to
2 customers for planning and budgeting electric costs.

3
4 **SUMMARY**

5 **Q. Please summarize your testimony.**

6 A. FPL has worked very hard to establish itself as a low-cost provider of superior
7 electric service. The Company's accomplishments reflect the efforts of a strong
8 management team and a quality-driven work force, efforts that have been
9 facilitated through progressive and responsible regulation. Collectively, these
10 efforts have succeeded in delaying as long as possible increases in FPL's retail
11 base rates while keeping pace with Florida's rapid growth and demand for energy.
12 Although price increases routinely are seen in insurance, healthcare, and other
13 sectors of the economy, FPL has managed its operations in a way that has resulted
14 in significant actual price decreases and substantial customer savings. Indeed,
15 were it not for the base rate decreases implemented by the Company in recent
16 years, FPL would not be in need of an increase at this time. In addition, even with
17 the full requested increase, FPL's base rates will still be lower than they were in
18 January 1999 prior to the implementation of the first revenue sharing agreement,
19 and also lower than they were over 20 years ago in January 1985. After many
20 years, an increase in retail base rates is now necessary to ensure that FPL can
21 continue to provide safe and reliable electric service at the levels its customers
22 have come to expect and that are consistent with the Company's past record of
23 performance.

1 Q. Does this conclude your direct testimony?

2 A. Yes.

ERRATA SHEET

(X) DIRECT TESTIMONY, OR () REBUTTAL TESTIMONY (PLEASE MARK ONE WITH "X")

WITNESS: Armando J. Olivera

[illegible]

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

FLORIDA POWER & LIGHT COMPANY

TESTIMONY OF LEONARDO E. GREEN

DOCKET NO. 050045-EI

March 22, 2005

1
2
3
4
5
6
7 **Q. Please state your name and business address.**

8 A. My name is Leonardo E. Green, and my business address is 9250 West Flagler
9 Street, Miami, Florida 33174.

10 **Q. By whom are you employed and what is your position?**

11 A. I am employed by Florida Power & Light Company (FPL or the Company) as the
12 Manager of Load Forecasting within the Resource Assessment & Planning
13 Business Unit.

14 **Q. Please describe your duties and responsibilities in that position.**

15 A. I am responsible for the development of FPL's peak demand, energy, economic,
16 and customer forecasts.

17 **Q. Please describe your educational background and professional experience.**

18 A. I received a Doctor of Philosophy Degree in Economics from the University of
19 Missouri-Columbia in 1983. Prior to joining FPL, I worked for Seminole Electric
20 Cooperative as the Load Forecasting Supervisor in the Rates and Corporate
21 Planning Department. I joined FPL in April of 1986, as a Senior Forecasting
22 Analyst in the Research, Economics and Forecasting Department. My
23 responsibilities included preparation, review, and presentation of the economic,

1 customer, and load forecasts for FPL. In August of 1986 I was promoted to
2 Supervisor of Economics and Forecasting within the Research, Economics and
3 Forecasting Department. In July of 1991, I became Manager of Load Forecasting
4 within the Resource Assessment and Planning Business Unit. I am responsible
5 for coordinating the entire economic and load forecasting effort at FPL.

6
7 In addition, I have held several Assistant Professorships of Economics and
8 Statistics as well as research and teaching positions with the University of
9 Missouri, Florida International University, and the University of South Florida.

10 **Q. Are you sponsoring an exhibit in this case?**

11 A. Yes. I am sponsoring an exhibit consisting of seven documents, LEG-1 through
12 LEG-7, which are attached to my direct testimony.

13 **Q. Are you sponsoring or co-sponsoring any MFRs in this case?**

14 A. Yes. I am sponsoring the following MFRs:

15 C-40, O & M Compound Multiplier Calculation

16 E-18, Monthly Peaks

17 F-6, Forecasting Models – Sensitivity of Output to Changes in Input Data

18 F-7, Forecasting Models – Historical Data

19
20 Additionally, I am co-sponsoring the following MFRs:

21 C-12, Administrative Expenses

22 C-15, Industry Association Dues

23 C-33, Performance Indices

- 1 C-34, Statistical Information
- 2 C-36, Non-Fuel Operation and Maintenance Expense Compared to CPI
- 3 C-37, O&M Benchmark Comparison by Function
- 4 E-9, Cost of Service – Load Data
- 5 E-11, Development of Coincident and Noncoincident Demands for Cost Study
- 6 E-12, Adjustment to Test Year Revenue
- 7 E-15, Projected Billing Determinants - Derivation
- 8 E-16, Customers by Voltage Level
- 9 E-19a, Demand and Energy Losses
- 10 E-19b, Energy Losses
- 11 E-19c, Demand Losses
- 12 F-5, Forecasting Models
- 13 F-8, Assumptions
- 14 **Q. Are you sponsoring or co-sponsoring any of FPL's 2007 Forecast Schedules**
- 15 **in this case?**
- 16 A. Yes. I am sponsoring FPL Forecast Schedule F-8, Assumptions.
- 17 **Q. What is the purpose of your testimony?**
- 18 A. My testimony addresses FPL's customer, energy sales, and peak demand
- 19 forecasts, which are used in this case. I will explain how these forecasts were
- 20 developed and that they are reasonable forecasts. Additionally, I will discuss the
- 21 growth in customers and the demand for electricity experienced in FPL's service
- 22 territory over the last 20 years.
- 23

DESCRIPTION OF THE HISTORICAL GROWTH IN FPL'S SERVICE

TERRITORY AND FLORIDA

Q. Please describe the historical growth in FPL's service territory.

A. Between 1985 and 2004, the average number of FPL customers served has increased by 1.6 million representing an increase of 61%. The increase in customers of 1.6 million in the last twenty years is the same as the prior twenty year period from 1966 to 1985. Energy sales have increased by 52,095 GWh for the period of 1985 to 2004 representing a growth of 93%. The energy usage for an average residential customer has increased by approximately 30% during the last twenty years. Similarly, summer peak demand increased by 93% during the last twenty years, representing an increase of 9,891 MW¹.

Q. How does this historical growth compare to the rest of the state of Florida?

A. The growth rates for FPL's service territory are comparable to the growth rates for the rest of Florida. Between 1985 and 2003, for the entire state of Florida, the number of customers grew from 5 million to 8 million, annual energy sales grew from 112,853 GWh to 219,021 GWh, and summer peak demand grew from 21,848 MW to 40,387 MW. This represents a growth of 61.5% in the number of customers, an increase of 94.1% in energy sales, and an increase of 84.9% in peak demand. FPL represents approximately 50% of the state's total electrical system and its growth characteristics mimic those for the rest of the state.

¹ The annual peaks for the same period grew by 64%.

FPL'S LOAD FORECASTING PROCESS AND RESULTS

1
2 **Q. Please describe FPL's forecasting process.**

3 A. FPL relies on econometrics as the primary tool for projecting future levels of
4 customer growth, energy sales, and peak demand. An econometric model is a
5 numerical representation, obtained through statistical estimation techniques, of the
6 degree of relationship between a dependent variable, e.g., the level of energy
7 sales, and the independent (explanatory) variables, which I describe in the
8 following paragraph. A change in any of the independent variables will result in a
9 corresponding change in the dependent variable. On a historical basis,
10 econometric models have proven to be highly effective in explaining changes in
11 the level of customer or load growth. These models have consistently been used
12 by FPL for various planning purposes and the modeling results have been
13 reviewed and accepted by this Commission in past regulatory proceedings.

14
15 Predicting the level of the dependent variable in future years requires assumptions
16 regarding the levels of the explanatory variables. Explanatory variables include
17 assumptions on the future number of customers, projected economic conditions,
18 weather, and the price of electricity, each of which is obtained from various
19 sources. For example, the future number of customers is based on population
20 projections produced by the University of Florida's Bureau of Economic and
21 Business Research (BEBR). The projected economic conditions are secured from
22 reputable economic forecasting firms such as Global Insight (formerly known as
23 DRI-WEFA). The weather factors are obtained from the National Oceanographic

1 and Atmospheric Administration (NOAA). The price of electricity for the model
2 reflects the Commission-approved base rates and adjustment clauses. Seasonal
3 factors in the consumption of electricity come from two sources: the weather
4 seasons, and the population seasonal pattern. FPL performs substantial analysis
5 to ensure that the assumptions regarding the explanatory variables are reasonable.
6 This ensures that the forecast of customers, energy sales, and peak demand are
7 both realistic and rational.

9 FPL'S CUSTOMER FORECAST

10 **Q. Please explain the development of FPL's customer growth forecast.**

11 A. The growth in customers in FPL's service territory is the primary driver of the
12 growth in the level of energy sales and peak demand. In order to project the
13 growth in the number of customers, FPL relies on population projections
14 produced by BEBR. Once a year, BEBR updates its population projections for
15 the state of Florida on a county-by-county basis. FPL's customer forecast is
16 based on BEBR's population projections released in April of 2004 and
17 incorporates an adjustment by FPL for the impact of the 2004 hurricanes on future
18 customer growth.

19 **Q. What was the impact of the 2004 hurricane season on FPL's projections of**
20 **customer growth?**

21 A. Because BEBR will not be incorporating the impact of the 2004 hurricanes in its
22 population projection until April 2005, FPL has separately estimated their impact
23 on its customer growth. These estimates were based on FPL's experience

1 following Hurricane Andrew. Document LEG-1 displays the growth in the
2 number of FPL customers since 1966 in which the values shown for each month
3 represent the growth in the number customers over the same month of the
4 previous year. Since 1966, the growth in customers has exhibited three distinct
5 cycles of growth patterns. In each cycle, the growth peaked at about 120,000
6 customers per year and then declined and bottomed at approximately 60,000 per
7 year. The only exception to this pattern occurred following Hurricane Andrew
8 where customer growth dropped to approximately 65,000 per year and hovered
9 around this figure for the next six years before recovering to a more robust
10 growth. As shown in LEG-1, in the current cycle, FPL's customer growth
11 reached a peak during the period of August 2003 to August 2004, with
12 approximately 120,000 customers having been added. However, as a
13 consequence of the three hurricanes (Charley, Francis and Jeanne) that struck
14 FPL's service territory in 2004, growth significantly declined. In fact, comparing
15 October 2004 to October 2003, FPL added only 93,790 customers. Furthermore,
16 by December of 2004, customer growth had continued to decline, to only 89,934
17 over December of 2003.

18
19 Before the hurricanes hit Florida in 2004, FPL was projecting an annual increase
20 of 80,000 new customers in 2005, 82,000 new customers in 2006, and 81,000 new
21 customers in 2007. When the impact of the 2004 hurricanes is taken into account,
22 the resulting projections are 72,000 new customers in 2005, 75,000 in 2006 and a
23 return to a trend of 80,000 in 2007, as shown in Document LEG-2. FPL is

1 assuming that the impact of the 2004 hurricanes will be short-lived and customer
2 growth will return to a more normal level in a couple of years as opposed to the
3 impact of Hurricane Andrew which lasted six years. This difference is primarily
4 due to the assumption that population growth in Florida will be fueled by larger
5 numbers of baby boomers retiring and moving to Florida, as well as an increasing
6 availability of jobs.

7 **Q. Is FPL's customer growth forecast reasonable?**

8 A. Yes. The forecast incorporates the most recent projections made by the
9 University of Florida and accounts for the impact of the 2004 hurricanes. FPL
10 assumes no lingering effect in terms of customer growth with a return to normal
11 growth in two years, primarily due to demographics.

12 13 **FPL'S ENERGY SALES FORECAST**

14 **Q. Please describe the process FPL used to forecast energy sales.**

15 A. The forecast of energy sales consists of three steps. First, total Net Energy for
16 Load (NEL), which is energy generated net of plant use, is projected. A superior
17 econometric forecasting model is obtained if NEL, instead of billed energy sales,
18 is matched to the explanatory variables. This is so because the NEL data do not
19 have to be attuned to account for billing cycle adjustments, which might distort
20 the real time match between the production and consumption of electricity.

21
22 Next, a line loss factor and a billing cycle adjustment are applied to the NEL to
23 arrive at total customer electricity use. Finally, revenue class models are

1 developed to distribute the forecast of total end-use sales of electricity forecast to
2 the different revenue classes (residential, commercial, industrial, etc.). FPL's
3 process and models used for forecasting energy sales are discussed in detail in
4 MFR F-5.

5
6 To project energy sales by revenue class, separate models for the residential,
7 commercial, and industrial revenue classes are developed. These revenue class
8 models are developed to obtain an objective allocation of the total energy sales
9 among FPL's different revenue classes. The sum of the sales for all revenue
10 classes will result in total energy sales. The energy sales for each revenue class is
11 then adjusted to reflect the total energy sales derived from the NEL model.

12 **Q. What are the primary inputs to determine the growth in energy sales?**

13 A. The growth in energy sales comes from the overall growth in the number of new
14 customers as shown on Document LEG-2 and per capita use of electricity by all
15 customers, shown on Document LEG-3. The product of per capita use and the
16 number of customers yields the NEL for a given period as shown in Document
17 LEG-4. The per capita use of electricity and the increased number of new
18 customers are both linked directly to the performance of the local and national
19 economy. When the economy is booming, the use of electricity increases in all
20 sectors: residential, commercial, industrial, etc. A strong economy creates new
21 jobs that attract new customers. Under these conditions, new households develop,
22 including those of retirees from other states. However, the reverse also holds true.
23 If the economy is performing poorly, customers with reduced incomes are more

1 apprehensive as to expenditures and tend to restrict their consumption of goods
2 and services. Electricity demand and sales slacken when incomes fall. Job
3 contractions reduce the number of new customers coming to Florida seeking
4 employment opportunities, and new household formations are postponed. FPL
5 relies on the outlook for the state and national economy produced by Global
6 Insight and the population growth forecast developed by the University of Florida.

7 **Q. What is the state of Florida's current economic outlook?**

8 A. Florida's economy has continued to grow at a strong pace, and although the 2004
9 hurricanes were a setback, the economy is expected to bounce back strongly.
10 According to Global Insight's 2004 Fourth Quarter Outlook, the "Florida
11 economy will remain a job leader in the years ahead." The strong population
12 growth is largely due to baby boomers approaching retirement and the availability
13 of jobs. Florida has been outperforming the national economy as shown in
14 Document LEG-5, and that pattern is projected to continue. The strong
15 population growth will result in increased demand for various services and new
16 homes; thus, these two sectors are leading the growth for Florida's economy.

17 **Q. What is the nation's current economic outlook?**

18 A. Global Insight projects that the U.S economy is expected to grow at an annual rate
19 of 3.5% in 2005, 3.3% in 2006, and 3.2% in 2007. Growth will be steady but not
20 stellar. Construction activity at the national level has been very strong, similar to
21 that of Florida's experience, but is expected to slow down in 2006 and 2007,
22 primarily due to mortgage rates increasing. There are two principal risks to this
23 outlook at the national level: one is the possibility of higher interest rates

1 stemming from trade deficits and inflationary pressures, and the other is
2 potentially higher oil prices. These risk factors could further slow down the
3 growth in the national economy.

4 **Q. Would there be an impact on your energy sales forecast if there is a change**
5 **in the current state and national economic conditions?**

6 A. Yes, there would be. Every forecast involves a degree of uncertainty. As I
7 previously stated in my testimony, Florida's economy should outperform the
8 nation in the near future. However, the macroeconomic variables such as interest
9 rates, different inflation indices, and the price of oil will all influence the output of
10 the Florida economy. Should there be a significant departure from the most likely
11 scenario for the state and national economy as forecasted by Global Insight, a
12 corresponding impact on the growth in customers, the level of energy sales, and
13 peak demand will occur.

14 **Q. What were the basic economic assumptions included in the forecast?**

15 A. The energy sales forecast was produced in October of 2004 shortly after the end
16 of the 2004 hurricane events. At that time Global Insight's outlook was that the
17 national economy will gradually evolve from an unemployment rate just over
18 5.5% to the path of "full employment" (4.5%-5.5% unemployment rate). The
19 economy of the state of Florida was forecasted again to outperform the rest of the
20 nation between 2005 and 2007, driven primarily by high growth in job creation
21 resulting from high tech and health services industries moving to Florida, and a
22 vibrant construction industry remaining at its already record levels. This forecast
23 also reflects that, as a consequence of the hurricanes in 2004, there will be

1 substantial reconstruction activity and infusion of insurance funds into the local
2 economy. This reconstruction activity typically occurs in stages: reduced
3 employment for a short period (a couple of months) followed by increased
4 employment as reconstruction proceeds (for perhaps 2 years) and finally a lull as
5 the reconstruction nears completion. Furthermore, the reconstruction fuels the
6 manufacturing sector to service this reconstruction with construction material,
7 furniture and transportation equipment. Economic projections show job growth
8 of 2.2% in 2004, 2.9% in 2005 and 2.2% in 2006. New housing starts in 2004
9 were up by almost 15% over 2003, a banner year, and real per capita income is
10 growing at 2.1%. The preliminary indicators suggest a continuation of optimistic
11 economic conditions.

12 **Q. What is FPL's Energy Sales forecast?**

13 A. FPL's energy use per customer is projected to grow at an annual rate of 1.6% in
14 2005, 2006, and 2007, as shown in Document LEG-3. Customer growth is
15 projected to grow at 1.7% for 2005 and 2006, and 1.8% for 2007. The resulting
16 growth in energy sales is estimated at 3.3% in 2005, 3.4% in 2006, and 3.5% in
17 2007, as shown in Document LEG-4. These energy and customer growth
18 parameters are similar to and slightly above the average of the last five years, a
19 period characterized by good economic performance, low prices of electricity, and
20 hotter than normal weather conditions.

21 **Q. Is FPL's forecast of energy sales reasonable?**

22 A. Yes. A forecast is considered reasonable if good judgment is used in estimating
23 (availing oneself of the appropriate and most credible assumptions on hand) and

1 testing the model and if the results or outputs make sense when compared to prior
2 similar situations. FPL followed this approach in preparing the forecast.

3
4 The models employed by FPL have good descriptive statistics with high degrees
5 of statistical significance. FPL is confident that the relationship that exists
6 between the level of energy sales and the economy, weather, customers, price of
7 electricity, and other variables has been properly assessed and numerically
8 quantified.

9
10 Furthermore, FPL was thorough and comprehensive in securing the best data
11 available to assess the impact of the 2004 hurricanes and their aftermath. FPL
12 relied on several sources of data and utilized the most respected firms in the
13 industry.

14 15 **FPL'S PEAK DEMAND FORECAST**

16 **Q. Please describe FPL's process to forecast the level of peak demand.**

17 **A.** FPL employs econometric models to predict the level of peak demand in its
18 service territory. The rate of absolute growth in FPL system load has been a
19 function of a larger customer base, weather conditions, continued economic
20 growth, changing patterns of customer behavior (including an increasing number
21 of electricity-consuming appliances) and more efficient heating and cooling
22 appliances. FPL develops peak demand models to capture these relationships.

1 The summer peak forecast is developed using an econometric model. The model
2 is a per-customer model that includes the total number of FPL customers, the
3 price of electricity, real Florida personal income as an economic driver, and
4 maximum temperature as a weather variable.

5
6 Like the system summer peak model, the winter peak model is also an
7 econometric model. The winter peak model is a per-customer model that includes
8 two weather-related variables: (1) the minimum temperature on the peak day; and
9 (2) heating degree hours from the prior day until 9:00 A.M. of the peak day. In
10 addition, the model also has an economic variable, Florida real personal income.

11
12 Additionally, monthly peaks are forecasted to provide information to be used in
13 rate design and for the scheduling of maintenance for power plants and fuel
14 budgeting. The monthly peak forecasting process consists of the following
15 actions:

- 16 - Development of historical seasonal factors for each month using the ratios
17 of historical monthly peaks to seasonal peaks (Summer = April through
18 October; Winter = November through March).
- 19 - Application of the seasonal factors to their respective seasonal peak
20 forecast to derive the peak forecasts by month. This process assumes that
21 the monthly ratios remain unchanged over the forecasting period.

1 **Q. How does FPL's projected rate of growth in peak demand compare to its**
2 **historical growth?**

3 A. FPL's projected rate of growth in peak demand is very similar to its historical
4 growth. Using summer peak demand as an example and as shown in Document
5 LEG-6, FPL's peak demand grew from 15,266 MW in 1993 to 20,545 MW in
6 2004. In 2004, FPL customers set six all-time peak records for electricity used on
7 the Company's system. For the forward-looking period, FPL is projecting a peak
8 demand of 21,769 MW by 2007, which is a 2.8% compound annual growth rate
9 between 2005 and 2007. The growth in peak per customer is projected to grow at
10 an annual average rate of 1.0% for the next three years compared to an annual
11 average growth of 0.6% for the last 12 years as shown in Document LEG-7.

12 **Q. Is FPL's peak demand forecast reasonable?**

13 A. Yes. FPL is confident that the relationship that exists between the level of peak
14 demand and the economy, weather, customers, price of electricity, and other
15 variables has been properly assessed and numerically quantified. The forecast
16 incorporates the most recent population estimates, including the impact of the
17 2004 hurricanes. The models employed by FPL have good descriptive statistics
18 with high degrees of statistical significance.

19 **Q. Please summarize your testimony.**

20 A. My testimony addresses FPL's customer, energy sales, and peak demand forecasts
21 used in this case. I have explained how these forecasts are developed and that
22 they are reasonable forecasts.

1 In summary, my testimony shows that FPL is projecting customer growth to be
2 1.7% in 2005 and 2006, and 1.8% in 2007. FPL is projecting energy sales to
3 increase by 3.3% in 2005, 3.4% in 2006 and 3.5% in 2007. Additionally, FPL is
4 projecting peak demand to increase by 0.3% in 2005, by 2.7% in 2006, and 2.8%
5 in 2007.

6 **Q. Does this conclude your direct testimony?**

7 **A. Yes.**

ERRATA SHEET

(X) DIRECT TESTIMONY, OR () REBUTTAL TESTIMONY (PLEASE MARK ONE WITH "X")

WITNESS: **Dr. Leonardo E. Green**

<u>PAGE #</u>	<u>LINE #</u>	<u>CHANGE</u>
7	3	add the word "of" to "in the number <i>of</i> customers over the same month"

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

FLORIDA POWER & LIGHT COMPANY

TESTIMONY OF SOLOMON L. STAMM

DOCKET NO. 050045 - EI

MARCH 22, 2005

1
2
3
4
5
6
7 **Q. Please state your name and business address.**

8 A. My name is Solomon L. Stamm. My business address is 9250 West Flagler
9 Street, Miami, Florida 33174.

10 **Q. By whom are you employed and what is your position?**

11 A. I am employed by Florida Power & Light Company (FPL or the Company) as
12 Director of Forecasts, Budgets and Analysis.

13 **Q. Please describe your duties and responsibilities in that position.**

14 As Director of Forecasts, Budgets and Analysis, I am responsible for the
15 development, maintenance and reporting of Company forecasts and budgets.
16 Additionally I support various ad hoc financial analyses for the Company.

17 **Q. Please describe your educational background and professional experience.**

18 A. I graduated from Temple University in 1978 with a Bachelor of Business
19 Administration, with a major in Accounting. In that same year I was employed
20 by Alexander Grant, Independent Public Accountants (presently Grant
21 Thornton). During my tenure with Grant I participated in engagements
22 providing services to a number of diverse industry groups in both the audit and
23 the management consulting businesses. After leaving Grant in September 1982, I

1 was employed by James A. Ryder Transportation (Jartran), and held a number of
2 positions culminating in the Assistant Controller position responsible for
3 revenue accounting and internal reporting. In February 1986, I was employed by
4 FPL Group as manager of general accounting. While at FPL Group, Inc. I also
5 held positions as manager of forecasting & budgeting and manager of SEC
6 reporting. On July 1, 1991, I accepted a position with FPL as manager of
7 disbursement accounting. Since that time I have held a number of positions
8 before my current assignment, including Internal Audit manager, Human
9 Resource systems manager and manager of the Y2K project for all the FPL
10 Group companies. I am a Certified Public Accountant in the state of Florida, and
11 a member of the American Institute of Certified Public Accountants and the
12 Florida Institute of Certified Public Accountants.

13 **Q. Are you sponsoring an exhibit in this case?**

14 **A.** Yes. It consists of the following documents:

15 Document No. SLS-1 Listing of MFRs and Schedules Sponsored in Whole or in
16 Part

17 Document No. SLS-2 MFR F-5 Forecasting Flowchart/Models

18 Document No. SLS-3 MFR F-8 Forecast Assumptions

19 Document No. SLS-4 Budget and Actual Net Income 2000 - 2004

20 Document No. SLS-5 Plant in Service Balances, 2002 and 2006

21 Document No. SLS-6 Customers, Usage and Billed Sales, 2002 and 2006

22 Document No. SLS-7 O&M Expense, 2002 and 2006

1 Document No. SLS-8 O&M Benchmark Comparison, 2002 Benchmark Year

2 Document No. SLS-9 O&M Benchmark Comparison, 1988 Benchmark Year

3 **Q. Are you sponsoring or co-sponsoring any MFRs in this proceeding?**

4 A. Yes. My Document No. SLS-1 shows the MFRs that I am sponsoring in whole
5 or in part.

6 **Q. Are you sponsoring or co-sponsoring any 2007 Turkey Point Unit 5
7 Adjustment Schedules or any of FPL's 2007 Forecast schedules in this case?**

8 A. Yes. My Document No. SLS-1 also shows the schedules that I am sponsoring in
9 whole or in part.

10 **Q. What is the purpose of your testimony?**

11 A. The purpose of my testimony is to:

12 (1) Discuss the process that was used to develop the forecast and MFRs;

13 (2) Present the major forecast assumptions; and

14 (3) Discuss the major drivers of increases in plant in service and operations and
15 maintenance expense.

16

17 **FORECAST AND MFR PROCESS**

18 **Q. What role did you play in the development of FPL's forecast?**

19 A. As FPL's Forecast and Budget Director, I have overall responsibility for
20 managing the capital expenditure (capital) and operations and maintenance
21 expense (O&M) budget processes and developing the per book forecast. As part
22 of this responsibility, I completed a review process with each of the business
23 units to ensure that all of the business unit budgets consistently utilized

1 corporate assumptions and provided the necessary level of detail to determine
2 that the forecasted results were reasonable and sufficient for this filing.

3 **Q. Please summarize the process used to develop FPL's filing in this docket.**

4 A. As discussed in Document No. MFR-F5, FPL's forecast process begins with the
5 issuance of budget instructions by Corporate Budgets to the business units. In
6 2004, budget instructions and a deliverables schedule were issued early to allow
7 for the additional time required for a rate case filing. Initial guidelines were
8 issued in May 2004 and were followed up in June with more detailed
9 instructions for completing the actual systems input.

10

11 Corporate assumptions were issued in early July to ensure uniformity among
12 business units on such items as inflation, pay programs, pay periods, etc. The
13 business units then began the internal process of developing business plans. In
14 August/September 2004, each business unit head presented the elements of their
15 plan including the funding requirements to the President and Chief Financial
16 Officer. These presentations provide the reasons and the drivers for the funding
17 levels. The President reviewed each business plan and FPL's total funding
18 requirement, followed up with the business units, consulted with the Chief
19 Financial Officer, and then approved the 2005 business unit O&M and capital
20 budgets and the 2006 and 2007 O&M and capital forecasts.

21

22 Subsequent to the President's approval, the individual business unit O&M and
23 capital budgets and forecasts were rolled up and merged with other items

1 forecasted such as revenues and depreciation expense. A financing plan was then
2 developed in December 2004 to complete the 2005 budget and the 2006 and
3 2007 forecast. The budget and forecast were the basis for FPL's filings in this
4 proceeding.

5 **Q. Is the process to develop the 2005 budget consistent with the development of**
6 **the 2006 and 2007 forecasts?**

7 A. Yes. Consistent with prior years, the budget process included the development of
8 a budget for one year (2005) and a forecast for subsequent years (2006 and
9 2007). The 2006 and 2007 forecasts were developed at the same time using the
10 same process as the 2005 budget.

11 **Q. Please summarize the process used to prepare the financial forecast, MFRs,**
12 **FPL's 2007 Forecast Schedules and FPL's 2007 Turkey Point Unit 5**
13 **Adjustment Schedules.**

14 A. As can be seen on my Document No. SLS-2, various feeders provide inputs to
15 the Consolidated Financial Model (CFM). The sales, net energy for load and
16 peak demand forecast; generation, power supply and fuel expense forecast; the
17 retail and wholesale base revenue forecast; the capital budget/forecast; and the
18 O&M budget/forecast, along with other supplemental forecast feeders provide
19 the information needed in the CFM to produce a complete financial forecast.
20 Using the information from the feeder systems, the CFM performs the business
21 logic calculations to generate forecasted financial statements. The CFM
22 produces the balance sheet and income statement detail at the level necessary for
23 the development of separation factors and the cost of service study. This detail is

1 transferred to the Regulatory Information System (RIS). As mentioned earlier,
2 the same process is utilized for the development of the 2005 budget and the
3 2006 and 2007 forecasts.

4
5 FPL prepares its O&M budget and forecasts at a budget activity level, consistent
6 with the way it manages its business, and does not normally include Federal
7 Energy Regulatory Commission (FERC) account detail. However, this
8 additional level of detail is needed to meet the requirements of certain MFRs.
9 Therefore, FPL converts the budget and forecasts at a budget activity level to
10 FERC accounts. The conversion process relies primarily on historical
11 relationships of budget activities to FERC accounts but allows for appropriate
12 adjustments. Once the business units complete their budgets and forecasts, the
13 information is fed both to the CFM model and the FERC Functionalization
14 System for conversion to FERC accounts.

15
16 Once the forecast produced by the CFM is complete, it is fed into the RIS. As
17 explained in more detail in my Document No. SLS-2, FPL developed the RIS
18 integrated database to assist in preparing the MFRs. The RIS integrates various
19 FPL systems normally used in the forecasting and regulatory process. The
20 system provides data validation and control routines to ensure consistency of
21 data between the RIS and feeder systems. Additionally, the system produces
22 exception reports, financial data output validations, and MFR control reports to
23 verify the accuracy and consistency of MFRs.

1
2 The balance sheet and income statement detail from the CFM is used by RIS to
3 develop forecasted regulatory adjustments in the same manner as it does for
4 historical regulatory adjustments for the Surveillance Report. These adjustments,
5 along with the balance sheet and income statement detail, are then transferred to
6 the Cost of Service System (COSS) which develops jurisdictional separation
7 factors. The jurisdictional separation study results are then transferred back to
8 the RIS which calculates FPSC jurisdictional adjusted net operating income
9 (NOI), rate base and capital structure and stores the results in RIS databases.
10

11 The jurisdictional adjusted results for NOI, rate base and capital structure are
12 then transferred to the COSS to be used to develop the Cost of Service which
13 develops revenue requirements at the individual rate level. The RIS databases
14 are also used to prepare rate base, NOI and capital structure on a per book and
15 jurisdictional adjusted basis. The same tool is used to create many MFRs and
16 provides for MFR data integrity and control. All MFRs were reviewed and
17 approved by the originating business unit and MFR sponsors.

18 **Q. Have FPL forecasts been accurate in the past?**

19 A. Yes. As demonstrated in the chart located in Document No. SLS-4, which
20 outlines how well our forecast in aggregate has predicted actual results over the
21 past five years, the results are as follows. In 2000, FPL's actual net income was
22 \$645 million, excluding merger costs, compared to a budget of \$645 million, a
23 0.0% variance. In 2001, FPL's actual net income was \$695 million, excluding

1 merger costs, compared to a budget of \$691 million, a 0.6% variance. In 2002,
2 FPL's actual net income was \$717 million compared to a budget of \$695
3 million, a 3.2% variance. In 2003, FPL's actual net income was \$733 million
4 compared to a budget of \$735 million, a -0.3% variance. In 2004, FPL's actual
5 net income was \$763 million, excluding the impact of hurricanes and settlement
6 of shareholder litigation, compared to a budget of \$773 million, a -1.3%
7 variance. On average over the past five years FPL's actual results varied only
8 0.4% from budget indicating that FPL's process for budgeting is highly effective
9 in predicting future operating results and can be relied upon in a rate setting
10 procedure.

11 **Q. What are the major assumptions that FPL used in developing its forecast?**

12 A. The major assumptions used by FPL in developing its forecast are listed in MFR
13 F-8. My Document No. SLS-3 shows the sponsors for each assumption.
14

15 **DRIVERS OF INCREASES IN PLANT IN SERVICE AND O&M EXPENSES**

16 **Q. Please summarize the general business conditions affecting the forecast.**

17 A. As shown on my Document No. SLS-6, FPL is forecasting a 350,000, or 8.7%,
18 increase in average customers from 2002, the last year that base rates were set,
19 to 2006, the test year. From 1986 to 2002 FPL was able meet incremental load
20 requirements primarily through productivity, reliability and capacity
21 improvements in its existing generation fleet and through purchased power. FPL
22 will not be able to continue meeting its incremental load requirements solely
23 through these measures. Accordingly, FPL is adding significant generating

1 capacity to its fleet. FPL is also faced with making significant investments in its
2 nuclear units. In addition, continued customer growth will require significant
3 investment in transmission and distribution facilities. It should be noted that
4 from 1985 to 2004 FPL invested \$18 billion in new plant and infrastructure,
5 which includes an \$8 billion investment in the expansion of the transmission and
6 distribution system and \$3 billion in the construction of new generating capacity.
7 For years, FPL has been either reducing or holding the line on O&M despite
8 continued growth in demand and the number of customers served, primarily
9 through operational efficiencies. Further opportunities to realize operational
10 efficiencies are more limited than in the past. FPL is also facing external cost
11 pressures in a number of areas including healthcare and insurance. At the same
12 time, FPL continues to experience upward pressure on O&M from the effects of
13 inflation, customer growth and operational requirements. These factors began to
14 manifest themselves in 2001 and were reflected in FPL's forecasted non-fuel
15 O&M projections during its last rate case. Actual non-fuel O&M expenditures
16 for 2002 were generally on target and were \$143 million higher than 2001,
17 representing the first significant increase in non-fuel O&M in over 10 years.
18 These factors are discussed in the testimonies of Mr. Green, Mr. Stall, Mr.
19 Mennes, Mr. Escoto and Ms. Williams.

1 **Q.** Please comment on the major drivers of the forecasted increase in gross
2 plant in service between 2002, the last year in which base rates were set,
3 and the 2006 test year.

4 **A.** As shown on Document No. SLS-5, electric plant in service (FERC account
5 101) is forecasted to increase by over \$5 billion from 2002 to 2006. I will
6 identify the major drivers of the increase and the witnesses who will testify in
7 greater detail about these drivers.

8 • Distribution and transmission plant is forecasted to increase by more
9 than \$2.4 billion from 2002 to 2006 accounting for 47% of the total
10 growth in gross plant. This increase is driven primarily by increased
11 demand from growth in customers and growth in use per customer. As
12 illustrated by my Document No. SLS-6, average customers are
13 forecasted to grow by 8.7% from 2002 to 2006 and average kWh usage
14 per customer is forecasted to increase by 2.3% translating to a total
15 increase in forecasted kWh sales of more than 11%. Mr. Mennes and Ms.
16 Williams will address transmission and distribution capital expenditures,
17 respectively.

18 • Other production plant is forecasted to increase by \$1.6 billion from
19 2002 to 2006 accounting for 32% of the total forecasted increase in gross
20 plant. This increase is driven primarily by the addition of new generating
21 capacity to meet increased customer demand and higher reserve margins.
22 Significant Other Production Plant additions since 2002 include

1 combustion turbines at Fort Myers, Sanford Unit 4, Martin Unit 8 and
2 Manatee Unit 3. Mr. Yeager will address production capital expenditures.

- 3 • Nuclear production plant is forecasted to increase by more that \$500
4 million from 2002 to 2006, accounting for 10% of the total forecasted
5 increase in gross plant. This increase includes more than \$210 million in
6 new plant associated with essential upgrades placed in service in 2004
7 and 2005 and is driven by investments such as the replacement of the
8 reactor vessel heads at the St. Lucie and Turkey Point nuclear power
9 plants, needed to maintain FPL's nuclear units, ensuring the continued
10 operation of these important, base-load generating units and the
11 provision of low cost energy through the end of the current operating
12 licenses, and preserving the option to extend such operations into the
13 future. Mr. Stall will address nuclear capital expenditures.

14 **Q. Please comment on the major drivers of the forecasted increase in**
15 **operations and maintenance expense between 2002, the last year in which**
16 **base rates were set, and the 2006 test year.**

17 **A.** As shown in my Document No. SLS-7, total Company per book operation and
18 maintenance expenses excluding only fuel, purchased power and deferred
19 expenses are projected to increase \$388 million from 2002 to 2006. I will
20 identify the major drivers of the increase and the witness who will testify in
21 greater detail. It should be noted that the O&M discussed below includes total
22 O&M and may include some items recovered through clauses.

- 1 • Administrative & General (A&G) O&M is forecasted to increase by
2 \$144 million from 2002 to 2006 accounting for 37% of the forecasted
3 increase in O&M expense excluding fuel, purchased power and deferred
4 expenses. The principal cost drivers are increased storm fund
5 requirements, higher employee benefit costs and higher insurance costs.
6 Storm fund requirements and insurance costs will be addressed by Mr.
7 Dewhurst and employee benefit costs will be addressed by Mr. Escoto.
- 8 • Nuclear O&M is forecasted to increase by \$85 million from 2002 to
9 2006 accounting for 22% of the forecasted increase in O&M expense
10 excluding fuel, purchased power and deferred expenses. The principal
11 cost drivers are activities to maintain reliability and plant performance,
12 to preserve long-term viability, and to meet increased regulatory
13 requirements. Nuclear O&M costs will be addressed by Mr. Stall.
- 14 • Transmission O&M is forecasted to increase by \$67 million from 2002
15 to 2006 accounting for 17% of the forecasted increase in O&M expense
16 excluding fuel, purchased power and deferred expenses. The principal
17 driver of this increase is forecasted costs in 2006 for a regional
18 transmission organization, which accounts for \$59 million of the total. \$7
19 million of this increase is due to costs related to FPL's New England
20 Division, which are not included in the jurisdictionalized O&M.
21 Transmission O&M will be addressed by Mr. Mennes.
- 22 • Steam and Other Production O&M is forecasted to increase by \$41
23 million from 2002 to 2006 accounting for 10% of the forecasted increase

1 in O&M expense excluding fuel, purchased power and deferred
2 expenses. The principal cost drivers are major maintenance work to
3 maintain plant reliability and availability and the operating costs related
4 to new plant additions. Steam and other production O&M costs will be
5 addressed by Mr. Yeager. Approximately \$10 million of this increase
6 relates to environmental and security costs that are recovered through the
7 environmental and capacity clauses.

8 **Q. Has FPL made a filing in this docket comparing its O&M costs to the**
9 **Commission-approved benchmark based on CPI and Customer Growth?**

10 A. Yes. MFR C-37 attached as my Document No. SLS-8 provides the
11 functionalized O&M expenses and the comparisons to the benchmark. MFR C-
12 37 uses 2002 as the benchmark year, the last year FPL's base rates were set. My
13 Document No. SLS-9 provides the functionalized O&M expenses and the
14 comparisons to the benchmark using 1988 as the benchmark year. The 1988
15 benchmark base year was the last benchmark year established by the
16 Commission in Docket No. 900038-EI Order No. 24460. FPL believes it is
17 appropriate to use 1988 in addition to 2002 as a benchmark year because it
18 provides a longer term view of the Company's O&M expense.

19 **Q. Please discuss the comparison of FPL's 2006 O&M to the Commission-**
20 **approved benchmark using 2002 as the benchmark year.**

21 A. As shown in my Document No. SLS-8, in aggregate, FPL's 2006 test year O&M
22 exceeds the benchmark based on 2002 by \$279 million. For each function over
23 the benchmark, I will identify the major drivers of the variance and identify the

1 witness who will testify in greater detail. It should be noted that excluding the
2 RTO costs and the increase in storm fund requirements discussed below, the
3 benchmark variance is reduced to \$123 million.

- 4 • Production Steam exceeds the benchmark amount by \$12.7 million or
5 10.3% driven primarily by major maintenance work to maintain plant
6 reliability and availability. Mr. Yeager will address production steam
7 O&M.
- 8 • Production Nuclear exceeds the benchmark by \$63.2 million or 22.1%
9 driven primarily by activities to maintain reliability and plant
10 performance, to preserve long-term viability, and to meet increased
11 regulatory requirements. Nuclear O&M costs will be addressed by Mr.
12 Stall.
- 13 • Production Other exceeds the benchmark by \$9.5 million or 21.5%
14 driven primarily by O&M related to the addition of generating capacity
15 in this category. Other production O&M costs will be addressed by Mr.
16 Yeager.
- 17 • Transmission exceeds the benchmark by \$61.9 million or 168% driven
18 by forecasted costs in 2006 for a regional transmission organization.
19 Transmission O&M costs will be addressed by Mr. Mennes.
- 20 • Customer Accounts exceed the benchmark by \$0.3 million or 0.3%
21 driven primarily by an anticipated increase in US Postal Service rates.
22 Customer accounts O&M costs will be addressed by Mrs. Santos.

1 • Sales Expenses exceed the benchmark by \$18.1 million driven entirely
2 by expenses related to revenue enhancement programs. In 2002, revenue
3 enhancement revenue less revenue enhancement expense was presented
4 as a net number in non-electric revenues for FPSC purposes. The current
5 forecasts for the years 2006 and 2007 change that treatment and present
6 revenue enhancement revenue and expense separately. Sales expense
7 O&M costs will be addressed by Ms. Santos.

8 • Administrative & General exceeds the benchmark by \$137.5 million or
9 42.5% driven primarily by higher storm fund requirements and employee
10 benefits. Storm fund requirements will be addressed by Mr. Dewhurst
11 and employee benefits will be addressed by Mr. Escoto.

12 **Q. Please discuss the comparison of FPL's 2006 O&M to the Commission-**
13 **approved benchmark using 1988 as the benchmark year.**

14 A. As shown in my Document No. SLS-9, when taking a longer term view, FPL's
15 test year O&M expense compares very favorably to the Commission-approved
16 benchmark. As per Document No. SLS-9, in aggregate, FPL's 2006 test year
17 O&M is \$813 million or 34.9% below the benchmark based on 1988,
18 demonstrating FPL's exemplary long term track record of controlling O&M
19 costs. For each function I will briefly discuss the benchmark variance and,
20 where applicable, identify drivers of positive variance.

- 21 • Production Steam is \$126.0 million or 48.0% below the benchmark.
- 22 • Production Nuclear is \$115.4 million or 24.9% below the benchmark.

- 1 • Production Other is \$24.7 million or 84.5% above the benchmark driven
- 2 primarily by O&M related to the addition of generating capacity in this
- 3 category. It should be noted that if production steam and production
- 4 other are combined to form a single category of production fossil, this
- 5 category is \$101.3 million or 34.7% below the benchmark.
- 6 • Power Supply is \$0.5 million or 8.3% below the benchmark.
- 7 • Transmission is \$4.9 million or 5.2% above the benchmark driven by
- 8 forecasted costs in 2006 for a regional transmission organization. If
- 9 regional transmission costs are excluded, transmission would be \$54.1
- 10 million or 57.7% below the benchmark.
- 11 • Customer Accounts are \$129.9 million or 51.1% below the benchmark.
- 12 • Customer Service is \$24.7 million or 63.4% below the benchmark.
- 13 • Sales Expenses are \$18.6 million above the benchmark driven entirely
- 14 by expenses related to revenue enhancement programs as previously
- 15 discussed.
- 16 • Administrative & General is \$200.0 million or 30.3% below the
- 17 benchmark.

18 INDEPENDENT FORECAST REVIEW

19 **Q. Has FPL had an independent examination of its forecasting process?**

20 **A.** Yes. FPL retained Ernst & Young, LLP to perform an independent examination
 21 of the accuracy, reasonableness and consistency of FPL's assumptions, financial
 22

1 forecasting system, and the results produced by the system. Mr. Barrett from
2 Ernst & Young, LLP, presents the results of this examination.

3 **Q. What were the conclusions of this independent examination?**

4 A. Mr. Barrett concludes that, in his opinion, the forecasting process used by FPL is
5 in conformity with American Institute of Certified Public Accountants
6 guidelines in all material respects, the process for preparation of the forecast was
7 comprehensive, the significant assumptions used to develop the financial
8 forecast were reasonable, and the data used in applying those assumptions was
9 materially consistent throughout the forecast. Mr. Barrett further concludes that
10 the financial forecast represents an accurate simulation of the test period
11 financial results, should the significant assumptions prove true.

12 **Q. Did this independent examination identify any inconsistencies or potential**
13 **inconsistencies in the forecast?**

14 A. Yes. Mr. Barrett identifies a few inconsistencies in the forecast, and his
15 Document MEB-4 estimates the revenue requirement impact of these
16 inconsistencies. In his testimony, Mr. Barrett concludes, and I agree, that the
17 impact of these inconsistencies is immaterial individually and in total.

18

19 **SUMMARY**

20 **Q. Please summarize your testimony?**

21 A. My testimony: (1) discusses the process that was used to develop the forecast
22 and MFRs; (2) presents the major forecast assumptions and identifies the
23 sponsors of each assumption; and (3) discusses the major drivers of increases in

1 plant in service and operations and maintenance expense since 2002, the last
2 year in which base rates were set.

3

4 In summary, the process for developing the forecast and MFRs is
5 comprehensive, consistent with prior years and subject to appropriate review
6 and approval by management. FPL's forecasts have historically been highly
7 effective in predicting future operating results and can be relied upon in a rate
8 setting procedure.

9 **Q. Does this conclude your direct testimony?**

10 **A. Yes.**

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

FLORIDA POWER & LIGHT COMPANY

REBUTTAL TESTIMONY OF SOLOMON L. STAMM

DOCKET NOS. 050045-EI, 050188-EI

JULY 28, 2005

Q. Please state your name and business address.

A. My name is Solomon L. Stamm. My business address is 9250 West Flagler Street, Miami, Florida 33174.

Q. Did you previously submit direct testimony in this proceeding?

A. Yes.

Q. Are you sponsoring an exhibit to your rebuttal testimony?

A. Yes, it consists of the following documents:

Document SLS-10 Staff's Second Set of Interrogatories Question No. 80

Document SLS-11 Explanation of Increase in Fossil Maintenance Costs

Document SLS-12 Increase in O&M Expense, Adjusted

Document SLS-13 Plant and Accumulated Depreciation

Document SLS-14 Martin Unit 8 and Manatee Unit 3 Plant In Service Balances

Document SLS-15 Budget Contingency

Document SLS-16 Schedule F-8, FPL's 2007 Forecast

Q. What is the purpose of your rebuttal testimony?

A. The purpose of my testimony is to:

- 1 1. Respond to the assertion made by South Florida Hospital and Healthcare
2 Association witness Lane Kollen that the company allows its O&M expense
3 to increase substantially coincident with rate filings and the use of projected
4 test years.
- 5 2. Respond to the assertion made by Office of Public Counsel witness Hugh
6 Larkin that adjustments should be made to FPL's forecasted plant in service
7 and accumulated depreciation balances based on a comparison of forecasted
8 balances to actual balances from December 31, 2004 through March 31,
9 2005.
- 10 3. Respond to the adjustment proposed by Office of Public Counsel witness
11 Hugh Larkin that FPL's forecasted plant in service balances for Martin Unit
12 3 and Manatee Unit 8 should be reduced to reflect the fact that they are
13 "under budget."
- 14 4. Respond to the adjustment proposed by Office of Public Counsel witness
15 Donna DeRonne to disallow the \$1.7 million contingency in FPL's O&M
16 forecast.
- 17 5. Respond to the assertion made by Office of Public Counsel witness Donna
18 DeRonne that the level of rate case expenditures in the forecast is not
19 justified.
- 20 6. Respond to the adjustment proposed by Office of Public Counsel witness
21 Donna DeRonne that the O&M expense associated with FPL's Nuclear
22 Passport Replacement Project be amortized over a four-year period for
23 ratemaking purposes.

7. Respond to the ratemaking treatment of distribution vegetation management expense proposed by Office of Public Counsel witness Donna DeRonne.

8. Respond to the assertion made by Office of Public Counsel witness Hugh Larkin and South Florida Hospital and Healthcare Association witness Lane Kollen that FPL's 2007 forecast is too far out in time to be a reliable basis for ratemaking.

TEST YEAR O&M EXPENSE

Q. Please describe the assertion made by Mr. Kollen regarding FPL's O&M expenses in rate case test years.

A. In his testimony, Mr. Kollen asserts that “the Company allows its O&M expense to increase substantially coincident with rate filings and the use of projected test years in those filings.” Specifically, he cites as examples FPL’s 2002 O&M expense projection in Docket 001148-EI and FPL’s 2006 O&M expense forecast in the current proceeding. Mr. Kollen further asserts that “Given ... the inherent ratemaking incentive to project excessive cost levels, the Commission should view the requested increase in test year O&M expense with a high degree of skepticism in considering whether the Company’s projections are prudent and reasonable.”

Q. Is Mr. Kollen's assertion correct?

A. No. It is a factually insupportable and completely unwarranted attack on the integrity of FPL's forecasting process.

1 At the outset I should point out that Ernst & Young conducted a detailed
2 independent examination of FPL's forecasting process. As discussed in the
3 direct testimony of Michael Barrett, Ernst & Young found FPL's forecasting
4 process to be in conformity with American Institute of Certified Public
5 Accountants ("AICPA") guidelines in all material respects, the process for
6 preparation of the forecast to be comprehensive, the significant assumptions
7 used to develop the financial forecast to be reasonable, and the data used in
8 applying those assumptions to be materially consistent throughout the forecast.
9 Mr. Barrett further concluded that the financial forecast represents an accurate
10 simulation of the financial results for the test periods, should the significant
11 assumptions prove true.

12
13 Ernst & Young could not have reached those conclusions had it found evidence
14 that FPL deliberately "loads up" the test year O&M expenses as Mr. Kollen
15 suggests. Mr. Kollen offers nothing to challenge Ernst & Young's conclusions.

16 **Q. With respect to FPL's 2002 test year O&M, did FPL's cost projections turn**
17 **out to be excessive?**

18 **A.** No. In Docket No. 001148-EI, FPL's projected test year 2002 jurisdictional
19 adjusted O&M expense was \$1,218,944,000. FPL's actual 2002 jurisdictional
20 adjusted O&M expense, as per the December 2002 Surveillance Report filed
21 with the Commission, was \$1,220,620,000. Thus, the difference between the
22 2002 test year projection and FPL's 2002 actual O&M expense was only
23 \$1,676,000, or 0.1%. Moreover, this small variance went in the opposite

1 direction from that suggested by Mr. Kollen: FPL's actual 2002 O&M expense
2 was slightly *higher* than projected. This clearly demonstrates that the projection
3 of O&M costs in Docket No. 001148-EI was not excessive and, in fact, was
4 quite accurate.

5 **Q. With respect to FPL's 2006 test year O&M, are FPL's cost projections**
6 **excessive?**

7 A. Once again, no. Although FPL is projecting a significant increase in O&M
8 expense in 2006, the level is not excessive in view of the substantial increase in
9 the necessary level of activities that FPL has documented. As shown on MFR
10 Schedule C-36, FPL is projecting a \$310 million, or 25.7% increase, in non-fuel
11 O&M expense from 2005 to 2006. The reasons for this projected increase were
12 described in detail in FPL's response to Staff's Second Set of Interrogatories
13 Question No. 80 and included increased storm expenses, fossil and nuclear
14 maintenance costs, employee benefits, insurance and RTO costs. The response
15 to Staff's Second Set of Interrogatories Question No. 80 is included with my
16 rebuttal testimony as my Document SLS-10. In addition, I have included
17 Document SLS-11, which provides additional detail on the justification for the
18 increased fossil plant maintenance costs in 2006.

19
20 A significant portion of the 25.7% increase in O&M expense is the result of
21 three items that are incremental in 2006: the increase in the annual storm
22 accrual, incremental RTO costs and the change in accounting for the expenses of
23 revenue enhancement projects. As shown on my Document SLS-12, the increase

1 in O&M expense from 2005 to 2006, adjusted for the three items described
2 above is only 11.0%, significantly lower than the 25.7% shown on MFR C-36.
3 As shown on my Documents SLS-10, SLS-11 and SLS-12, while FPL is
4 projecting a significant increase in O&M costs in 2006, these costs have been
5 well documented, are justified and are not excessive.

6
7 **PLANT IN SERVICE AND ACCUMULATED DEPRECIATION BALANCES**

8 **Q. Please describe the adjustments proposed by Mr. Larkin to FPL's**
9 **forecasted plant in service and depreciation balances.**

10 A. Mr. Larkin is proposing adjustments to FPL's forecasted plant in service and
11 accumulated depreciation balances in the test year based on the average variance
12 of actual to forecasted balances for the four month period December 2004
13 through March 2005.

14 **Q. Are the adjustments proposed by Mr. Larkin appropriate?**

15 A. No. The selection of four months of data from December 2004 to March 2005 is
16 both arbitrary and too short a time period upon which to base an adjustment. The
17 last historical month in FPL's forecast was August 2004. At the time Mr. Larkin
18 prepared his analysis to support his proposed adjustment there were seven
19 months of actual data available (September 2004 through March 2005).
20 However, Mr. Larkin seems to have arbitrarily selected only four months
21 (December 2004 through March 2005) on which to base his adjustment. As
22 shown on my Document SLS-13, had Mr. Larkin chosen any other four-month
23 period of data available to him -- September through December, October

1 through January, or November through February -- the magnitude of his
2 proposed adjustment would have been smaller. Similarly, if he had used *all* of
3 the data available (September 2004 through March 2005) the magnitude of his
4 adjustment would again have been smaller.

5
6 Of perhaps even greater importance, Document SLS-13 shows that the
7 percentage variances between the 2005 actuals and projections are very small,
8 consistently under 1% in all but one instance. This demonstrates the accuracy of
9 FPL's forecasting process and thus makes any adjustment of the sort Mr. Larkin
10 proposes inappropriate. Finally, I would like to point out that Document SLS-13
11 shows a greater variance between 2005 actuals and projections for the
12 accumulated provision for depreciation than for gross plant in service. Thus, if
13 one were to adjust the accumulated provision for depreciation and gross plant in
14 service by the percentage variance each has experienced in 2005, it would result
15 in *higher* net plant in service and hence rate base (net plant in service reflects
16 gross plant in service less accumulated depreciation).

17
18 **MARTIN UNIT 3 AND MANATEE UNIT 8 PLANT IN SERVICE**

19 **Q. Please describe the adjustment proposed by Mr. Larkin with respect to the**
20 **plant in service balances for Martin Unit 8 and Manatee Unit 3.**

21 **A.** Mr. Larkin is proposing an adjustment to reduce the forecasted plant in service
22 balances for Martin Unit 8 and Manatee Unit 3. The proposed adjustment is
23 based on Mr. Larkin's assertion that the final construction cost for Martin Unit 8

1 will be \$28.7 million under budget and Manatee Unit 3 will be \$24.0 million
2 under budget.

3 **Q. Is the adjustment proposed by Mr. Larkin appropriate?**

4 A. No. As shown on my Document SLS-14, Mr. Larkin mistakenly calculated his
5 adjustment by comparing a December 2003 internal construction-cost target for
6 Martin Unit 8 and Manatee Unit 3 (the "FPL Management Budget" shown in
7 Column 2) to the June 30, 2005 projection of the total construction costs for
8 those units (the "Current Projection" shown in Column 4). That comparison
9 resulted in the alleged budget under-runs upon which Mr. Larkin's adjustment is
10 based (see "Current Projection Versus Management Budget" column). In fact,
11 FPL's test year forecast included substantially lower estimates of the Martin
12 Unit 8 and Manatee Unit 3 construction costs than the FPL Management
13 Budget. The test year forecast amounts are shown in Column 3, "Projected
14 MFR B-11." The column entitled "Current Projection Versus MFR B-11"
15 shows that the test year forecast for these construction costs is less than 1%
16 above the Current Projection, demonstrating that FPL's forecast of those costs is
17 extremely accurate. Adjusting an accurate forecast for a single, minor variation
18 would not be appropriate, and Mr. Larkin's adjustment for the Martin Unit 8 and
19 Manatee Unit 3 construction costs accordingly should be rejected.

20
21 **O&M BUDGET CONTINGENCY**

22 **Q. Please describe the adjustment proposed by Ms. DeRonne to disallow the**
23 **\$1.7 million contingency amount in FPL's O&M forecast.**

1 A. Ms. DeRonne is proposing an adjustment to remove a \$1.7 million budget
2 contingency included in the test year O&M expense budget based on a “lack of
3 support or a reasonable description.”

4 **Q. Is the adjustment proposed by Ms. DeRonne appropriate?**

5 A. No. First, the contingency is simply a provision for unbudgeted corporate
6 expenses. The contingency is included in the Executive budget because this
7 helps ensure that it will receive appropriate executive-level input and scrutiny,
8 but the contingency can be used to cover unexpected costs throughout many
9 areas of the Company’s budget. Including a contingency of this nature in a
10 corporate budget the size of FPL’s is a prudent budgeting practice, in that it
11 recognizes that the company will invariably incur unplanned expenses during
12 the course of a year.

13

14 As shown in my Document SLS-15, FPL’s budget contingency averaged \$1.7
15 million per year from 2002 through 2005. This demonstrates that including a
16 contingency is an ongoing budgeting practice at FPL and that the amount
17 included in the test year is essentially identical to the average level in recent
18 non-test year budgets. Second, Document SLS-15 also shows that the 2006
19 budget contingency represents only 0.1% of total projected O&M. It should also
20 be noted that in each of the last three historical years, FPL’s unbudgeted
21 corporate expenses have significantly exceeded the contingency that was
22 budgeted.

23

RATE CASE EXPENSES

1
2 **Q. Please describe the assertions made by Ms. DeRonne concerning the level of**
3 **forecasted rate case expenses.**

4 A. In her testimony, Ms. DeRonne asserts that FPL's forecasted rate case expenses
5 are "excessive" and expresses concern that "some of the rates being charged to
6 [sic] FPL's outside consultants are excessive."

7 **Q. Are Ms. DeRonne's assertions supported by evidence?**

8 A. No. Ms. DeRonne provides no support or evidence to substantiate her assertion
9 that FPL's rate case expenses are "excessive" and that the rates charged by
10 consultants are "excessive." Ms. DeRonne's assertion regarding excessive cost
11 is supported only by her opinion that the current proceeding is "clearly
12 imprudent and unreasonable." Ms. DeRonne's assertion regarding excessive
13 rates charged by consultants is supported only by a listing of the rates charged
14 by several of the consultants hired by FPL, with no comparisons or other
15 analysis of what market levels would be for the services provided by those
16 consultants. In short, she provides no support whatsoever to defend her assertion
17 that these rates are excessive.

18 **Q. Are FPL's rate case expenses reasonable?**

19 A. Yes. MFR C-10 provides a breakdown of the amounts expected to be incurred
20 throughout the entire case. The \$8,950,000 amount was developed from the
21 actual expenses incurred related to the 2001 rate proceeding. FPL incurred \$4.5
22 million for that case. The 2001 case was settled before the discovery period was
23 concluded, and it did not involve a hearing. It also was initiated by the

1 Commission and therefore did not involve the expense to FPL of preparing and
2 supporting a request to increase rates and charges. When FPL forecast rate case
3 expenses for this docket, it reasonably expected that the current case would
4 involve more activity because FPL is requesting a rate increase. So far,
5 circumstances have certainly borne out FPL's expectations.

6
7 Furthermore, the costs associated with a hearing, which did not occur in the last
8 case, would have added a significant amount of costs to the total rate case costs
9 incurred in the last case. Hearings, and the associated preparation, involve the
10 time/cost of outside consultants, attorneys, and all of the hearing logistics (e.g.
11 hotel rooms, meals, travel costs, etc.). At the time FPL prepared its rate case
12 expense forecast, it could not have reasonably counted on this case settling
13 without a hearing and therefore included in its projection the costs that would be
14 associated with a hearing. Based upon all of these considerations, the estimated
15 cost of the current case of approximately twice the amount expended on the
16 prior case is considered to be a conservative estimate for the current case.

17
18 **NUCLEAR PASSPORT REPLACEMENT PROJECT**

19 **Q. Please describe the adjustment proposed by Ms. DeRonne.**

20 **A.** With respect to the Nuclear Passport Replacement Project (Passport), Ms.
21 DeRonne is proposing to defer and amortize the O&M costs over a four year
22 period.

23 **Q. Has Passport been properly accounted for in the test year?**

1 A. Yes, the Passport project is a legitimate business expense properly accounted for
2 under generally accepted accounting principles in the test year. The
3 Commission should not isolate a single item in one department's budget and
4 adjust the test year expenses down based on it.

5
6 **DISTRIBUTION VEGETATION MANAGEMENT EXPENSE**

7 **Q. Please describe the adjustment proposed by Ms. DeRonne.**

8 A. Ms. DeRonne proposes that, in the event FPL does not actually spend the
9 amount it receives in rates for vegetation management costs, the amount under-
10 spent should be returned to ratepayers.

11 **Q. Do you agree with the adjustment proposed by Ms. Deronne?**

12 A. No. As discussed in Ms. Williams' rebuttal testimony, FPL's projected test year
13 expense for distribution vegetation management is reasonable. It is only one of a
14 vast number of separate types of expenses that are reflected in FPL's test year
15 O&M expense forecast. There is no rational basis to isolate distribution
16 vegetation management expense and make adjustments in subsequent years,
17 solely for variations in that expense.

18

19 **2007 FORECAST**

20 **Q. Please describe the assertions made by Mr. Larkin and Mr. Kollen**
21 **concerning the 2007 forecast.**

22 A. With respect to the 2007 forecast, Mr. Larkin states in his testimony that "It is
23 highly unlikely that these projections could be relied upon by the Commission in

1 determining whether any revenue requirement increase exists beyond what
2 might be justified by the test year ending December 31, 2006.” Mr. Kollen states
3 in his testimony that “ ... the projected data for a 2007 test year or the twelve
4 months ended May 31, 2008 test year are even more speculative than the
5 projected data for the 2006 test year.” Neither Mr. Lane nor Mr. Kollen offers
6 any support or documentation for his assertion.

7 **Q. Are FPL’s 2007 and Turkey Point 5 projections “unreliable” and**
8 **“speculative”?**

9 A. Absolutely not. As discussed in my direct testimony, the 2007 and Turkey Point
10 5 forecasts were developed at the same time and using the same comprehensive,
11 systematic and robust forecasting process that was used to develop the 2005
12 budget and the 2006 test year forecast. Because FPL expected that the results of
13 this process would underlie its rate filing, significant additional scrutiny was
14 applied to both the 2006 and 2007 forecasts. At the operating unit level, three-
15 year detailed business plans were developed. Elements of these plans --
16 including the O&M and capital expenditure funding requirements for all three
17 years -- were presented to the President and Chief Financial Officer for review
18 and approval. The O&M and capital expenditure funding requirements for all
19 three years were thoroughly reviewed to ensure they were consistent with the
20 operating unit business plans. Major assumptions used in development of the
21 2007 forecast are detailed on “MFR F-8 Projected Year Ended 12/31/07 FPL
22 Total” and are attached to this testimony as Document SLS-16. These
23 assumptions are reasonable, have been appropriately reviewed and have been

1 consistently applied. The models used in the 2007 forecasting process are the
2 same models used to develop the 2005 budget and 2006 test year forecast. They
3 have been developed by subject matter experts, have been thoroughly tested and
4 are operated by qualified and knowledgeable personnel with appropriate
5 management review and approval.

6 **Q. Did Ernst & Young review FPL's 2007 forecast?**

7 A. Yes, it did. As reflected in Mr. Barrett's direct testimony, Ernst & Young's
8 independent examination of FPL's forecasting process covered 2005, 2006 *and*
9 2007. Ernst & Young's conclusions about the reasonableness of the forecasting
10 process and its consistency with the AICPA guidelines apply to 2007 just as they
11 do to 2005 and 2006.

12 **Q. Does this conclude your rebuttal testimony?**

13 A. Yes.

1 **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

2 **FLORIDA POWER & LIGHT COMPANY**

3 **DIRECT TESTIMONY OF MICHAEL BARRETT**

4 **DOCKET NO. 050045-EI**

5 **MARCH 22, 2005**

6 **Q. Please state your name, current position and business address.**

7 A. My name is Michael E. Barrett. I am a Partner with the accounting firm of Ernst
8 & Young LLP. My business address is 600 Peachtree Street NE, Suite 2800,
9 Atlanta, GA 30308.

10 **Q. Please describe your qualifications.**

11 A. I currently serve as Ernst & Young's National Director of the Electric & Gas
12 Energy Industry, where I specialize in providing audit and advisory services to the
13 electric, gas, water and wastewater industries. In the course of my career, I have
14 served as either the audit partner or technical reviewer for hundreds of audits of
15 companies in these industries, all across the United States. In addition, in my role
16 as National Director, I am consulted on most substantive technical accounting
17 issues on audits performed by Ernst & Young in the electric and gas energy
18 industry. I am a Certified Public Accountant in Florida, Georgia, Pennsylvania,
19 Oklahoma and Virginia and am a member of the American Institute of Certified
20 Public Accountants (AICPA).

1 In 1976, I started my career with the Federal Power Commission, which later
2 became the Federal Energy Regulatory Commission (FERC), as an auditor
3 responsible for completing audits of electric and gas utilities for compliance with
4 the FERC's Uniform System of Accounts.

5
6 In 1981, I joined the accounting firm of Coopers & Lybrand in its National Utility
7 Advisory Group as a supervisor responsible for audits and consulting projects to
8 utilities. I was admitted into the partnership in 1988. I joined Ernst & Young in
9 my current position in 1998.

10
11 My experience includes financial audits of numerous electric and gas utilities as
12 well as several energy marketers and traders. I have previously testified as an
13 expert in over 20 regulatory proceedings and arbitrations.

14 **Q. What is your experience reviewing electric utility forecasts?**

15 A. I have hands-on experience with electric utility forecasts through rate case
16 assistance, litigation assistance and audits of financial statements. In a large
17 number of financial audits for which I have been responsible, forecasts were used
18 in the valuation of derivatives and asset impairment assessments. I have also been
19 responsible for quality control reviews over a number of valuations performed by
20 Ernst & Young as clients were adopting the new goodwill accounting standards.
21 Further, I have worked on a number of litigation projects that have involved
22 valuations of assets or companies, all of which rely on forecasted data. Finally, I
23 completed a feasibility study for a wastewater utility as part of a financing

1 package it was seeking, and performed an audit of a financial forecast required by
 2 a client's bond indenture.

3 **Q. What is the purpose of your testimony?**

4 A. Florida Power & Light Company (FPL) has asked me to assess the financial
 5 forecasting process used by FPL to forecast the years 2005, 2006 and 2007 in
 6 connection with FPL's request to increase base rates, and to present the results of
 7 my review. In particular, I will address the following topics:

- 8 • Comment on the preparation of the FPL financial forecast including the
 9 robustness and comprehensiveness of the FPL financial forecasting process
- 10 • Address the overall reasonableness of the significant assumptions used to
 11 develop the financial forecast
- 12 • Consider the consistency of the significant data used in applying those
 13 assumptions throughout the forecast
- 14 • Assess the presentation of the FPL financial forecast, including the accuracy
 15 with which the FPL financial forecast presents the test period financial results
 16 should the significant assumptions prove true.

17 **Q. Are you sponsoring an exhibit in this proceeding?**

18 A. Yes. It consists of the following five documents:

19	<u>Document No.</u>	<u>Description</u>
20	MEB-1:	Curriculum Vitae of Michael E. Barrett
21	MEB-2:	AICPA Guidelines for Preparation of Financial Forecasts
22	MEB-3:	FPL Forecasting Process Overview
23	MEB-4:	Summary of Impact of Differences in Financial Forecast

MEB-5: Comparison of Prior Periods Forecast to Actual Performance

Q. What standards did you follow in conducting your independent assessment of FPL's financial forecasting process?

A. I used the AICPA guidelines for prospective financial information as standards for assessing FPL's financial forecasting process. The guidelines provide the broad principles and requirements that govern the preparation of financial forecasts, and thus can be used to determine that a forecast is prepared in a reasonable and prudent manner. The eleven AICPA guidelines are presented in Document No. MEB-2.

Q. What procedures did you perform to develop your conclusions?

A. I utilized a work program designed to evaluate FPL's financial forecasting process in light of the AICPA standards. I considered both FPL's financial forecasting process itself and the specific assumptions used in the forecasts for 2005, 2006 and 2007. The following summarizes the procedures I followed:

- Develop an understanding of the overall financial forecast process, including the flow of information from the business units through the forecasting organization and financial model to the final preparation of the financial forecast.
- Identify the inputs to the forecast from the business units and develop an understanding of the specific forecasting processes used by the business units providing the inputs.
- Develop an understanding of the operation of the financial forecasting model used by FPL to take the various inputs and generate the financial forecast.

- 1 • Trace selected portions of the 2005, 2006 and 2007 forecasts to the
2 Consolidated Financial Model (CFM) inputs, and trace selected CFM inputs
3 to their source documentation.
- 4 • Develop an understanding of FPL's "FERC functionalization" of its operating
5 and maintenance (O&M) forecast, which is the translation of the O&M
6 forecast into FERC accounts.
- 7 • Develop an understanding of the processes for determining separation factors
8 and jurisdictional utility values, and for generating the minimum filing
9 requirements and the 2007 schedules (MFRs and 2007 Schedules) for the rate
10 case.
- 11 • Assess the reasonableness and comprehensiveness of assumptions from the
12 business units, and the consistency of assumptions across the inputs to the
13 financial forecast model.
- 14 • Perform tests to confirm that the significant elements of the financial
15 forecasting process operate as designed, and ensure the internal consistency of
16 data used in the 2005, 2006 and 2007 forecasts.
- 17 • Assess the historical performance of the financial forecasting process by
18 comparing forecast and actual results for 2002, 2003 and 2004.

19 **Q. What have you concluded?**

20 A. My major conclusions are:

- 21 • In all material respects, the financial forecast was prepared in conformity with
22 the AICPA guidelines.

- 1 • The material processes for developing the base revenue forecasts from the
2 Resource Assessment and Planning and Rate departments, and the material
3 processes for developing the base O&M and capital forecasts by the business
4 units, are comprehensive and well founded, with adequate oversight and
5 documentation of significant inputs.
- 6 • The significant inputs from the business units to the CFM can be traced to
7 source documentation.
- 8 • The significant assumptions used by the business units in developing their
9 inputs are reasonable.
- 10 • The components of the financial forecast are prepared by qualified and
11 knowledgeable personnel with appropriate management review and approval.
- 12 • The financial forecast was prepared using appropriate accounting principles,
13 consistent with historic practices used in reporting financial results.
- 14 • The basic CFM modules for revenue, O&M and capital (including calculation
15 of capital going into plant in service, depreciation and AFUDC) consistently
16 apply the source inputs and properly reflect business practices and accounting
17 guidelines.
- 18 • The CFM performs cash flow and cash requirements calculations as designed.
- 19 • The significant other inputs to the forecasted utility financial statements were
20 assessed and found to be reasonable. Further, FPL regularly and consistently
21 compares forecasts to actuals and makes adjustments to its recurring processes
22 to fine tune the future forecasts.

- 1 • The significant adjustment and allocation items were materially consistent
2 with business unit inputs and assumptions.
- 3 • The Regulatory Information System (RIS) process for applying FERC account
4 detail and cost of service identifiers to the per book values in the financial
5 forecast is reasonable and consistent with the recording of historical
6 information.
- 7 • The RIS process for taking the per book values in the financial forecast,
8 detailed by cost of service identifiers, and applying the jurisdictional
9 separation factors obtained from the Cost of Service System, to develop the
10 jurisdictional utility values preserves the integrity of the per book values, is
11 well founded and is the same process used in developing FPL's monthly
12 surveillance reports.
- 13 • The RIS model also generates the information for a significant portion of the
14 MFRs and 2007 Schedules, thus controlling the preparation of the MFRs and
15 2007 Schedules and ensuring that the MFRs and 2007 Schedules accurately
16 report the information generated in the forecast.
- 17 • The FPL financial forecast represents an accurate simulation of the test period
18 financial results, should the significant assumptions prove true.

19

20 **THE FPL FINANCIAL FORECASTING PROCESS**

21 **Q. Please provide an overview of the financial forecasting process at FPL.**

22 **A.** The financial forecast is the output of various inputs from the responsible business
23 units whose personnel are qualified in specific areas such as economics,

1 operations, engineering, finance and accounting. (See Document No. MEB-3 for a
2 schematic overview of the financial forecasting process; see the testimony of Mr.
3 Stamm for a more in-depth discussion.) In turn, the inputs to the CFM are the
4 result of processes within the responsible business units. The major processes
5 providing input to the financial forecast include:

- 6 • The Resource Assessment and Planning Department (RAP) develops forecasts
7 of customers, sales, peak load and other parameters that drive operations.
- 8 • The Rate Department converts the RAP customer and sales forecasts into
9 forecasts by rate classes and calculates forecasted revenues from existing
10 rates.
- 11 • O&M expense and capital expenditure forecasts are developed by each of the
12 operating and staff business units.
- 13 • The CFM applies these inputs and performs certain calculations. The CFM
14 applies capital spending to the appropriate time period and calculates
15 construction work in process (CWIP). When capital investments go into
16 service, the CFM closes the spending to electric plant, transferring CWIP to
17 electric plant in service, and calculates and applies depreciation. If allowance
18 for funds used during construction (AFUDC) applies to an investment, the
19 CFM also calculates AFUDC. With respect to cash and financing, the CFM
20 calculates receipts and disbursements, changes in cash and changes in short
21 term debt or temporary cash investment. The information developed in the
22 CFM is used in calculating rate base and cost of service. The CFM produces
23 summary level financial statements for FPL for management's use. The

1 financial forecast is FPL's plan for the future of the Company and is used by
2 management in making decisions and assessing performance.

- 3 • The RIS applies FERC account detail and cost of service identifiers to the per
4 book values in the financial forecast, then applies the jurisdictional separation
5 of factors obtained from the Cost of Service System, and calculates
6 jurisdictional utility values and MFR and 2007 Schedule data for the rate case.
- 7 • The Responsibility Reporting System (RRS) provides monthly comparisons of
8 forecast to actual for variance analysis as part of FPL's management control.

9
10 In addition to these major processes, there are numerous other processes that
11 provide inputs to the financial forecast model, such as tax considerations from the
12 Tax Department, benefit costs from the Human Resources Department,
13 allocations such as the allocation of management costs between regulated and
14 non-regulated affiliates from the Accounting Department and financing costs
15 from the Treasury Department. There are also various other income statement and
16 balance sheet accounts besides the base revenue, base O&M and base capital
17 driven accounts, all of which are prepared in order to present full forecasted
18 financials for FPL.

19
20 The Forecasting, Budgeting and Analysis (FBA) Department has primary
21 responsibility for collecting common assumptions to be used in the financial
22 forecast from the appropriate sources (this would include items such as planned
23 salary increases and forecasted sales), communicating the assumptions and

1 forecast guidelines to the business units, validating the internal consistency of the
2 data, producing the financial forecast by consistently applying the inputs and
3 operating the CFM, and obtaining appropriate management review and approval.

4 **Q. Please briefly describe the inputs from the RAP and Rate Departments that**
5 **lead to the revenue forecast.**

6 **A.** RAP uses econometric models to provide forecasts of economic assumptions,
7 customers, sales and peak demand.

8
9 Economic assumptions are taken from DRI's Global Insight Model, the same
10 source used by the Florida Public Service Commission (FPSC) and the Florida
11 state government.

12
13 Regarding customers, the University of Florida Bureau of Economics and
14 Business Research provides projections of population by county that drive the
15 Company's projections. RAP applies judgment and experience in incorporating
16 the effects of specific events such as hurricanes.

17
18 Regarding sales, RAP forecasts net energy for load, then adjusts for line losses
19 and company use to arrive at delivered sales, which are then adjusted for unbilled
20 sales to arrive at billed sales by revenue class. The key drivers of forecasted sales
21 are weather data, the price of electricity and real Florida income. Weather is also
22 the key driver of peak demand.

1 RAP provides its forecast methods and models, including statistical validity, to
2 the FPSC for review. RAP forwards its forecasted information to the Rate
3 Department, which translates it into rate classes based primarily on historic and
4 known information about specific rate classes, applies the billing determinants for
5 the current tariff schedules, analyzes the individual tariffs by tariff component,
6 and calculates the forecasted revenue from current rates. The revenue forecast is
7 forwarded to FBA for management review and approval before it is incorporated
8 into the CFM.

9 **Q. Please briefly describe the O&M and Capital Expenditure forecast processes.**

10 A. Each business unit has its own internal process for forecasting O&M and capital
11 spending. All of the processes have certain elements in common, including:

- 12 • A dedicated planning and budgeting organization with experience in
13 developing budgets, which develops a bottom up budget from section or
14 location to department to business unit.
- 15 • Utilization of common assumptions provided by the FBA.
- 16 • Top down direction from business unit management as well as detailed review
17 and approval procedures from business unit management.
- 18 • Development of recurring base O&M and capital expenditures on a
19 combination of “key driver” based methods and specific knowledge, and
20 development of project O&M and capital expenditures based on specific
21 analysis (zero based) methods and specific assumptions.
- 22 • An annual O&M budgeting process that starts with development of key
23 drivers, key operational issues and key performance measures; proceeds to

development of a business plan; and then to detailed submissions and review and development of a three-year forecast with the first year of the forecast being the annual budget.

- An annual capital budget process that follows a similar approach over a five-year forecast period. Capital spending projects require extensive documentation of project justification. Various alternatives are evaluated. The end result is a specific plan for construction of facilities. The essential construction requirements are transmitted to the specific groups that develop the detailed capital budgets.
- Controls driven by key performance measures and monthly comparisons of historic actuals to forecast.

As noted above, FPL's O&M budgeting process regularly generates forecasted results for the upcoming year and two subsequent years. Typically this process results in preparation of a budget for the upcoming year that contains substantial detail, while the forecasts for the subsequent two years are at a summary level. For this budget cycle, due to the rate case, the FPL business units prepared forecasts for 2006 and 2007 that contain considerably more detail than they would in non-rate case years.

Q. Please discuss the process, tools and methodology used in the preparation of the financial forecast, including the CFM.

A. The FBA manages the compilation of common assumptions to be used in the financial forecast from the appropriate sources, communicating the assumptions

1 and detailed forecast guidelines and instructions to the business units, and
2 validating the internal consistency of the data. The FBA produces the financial
3 forecast for management review and approval by consistently applying the
4 business unit inputs, and maintaining and operating the CFM. The CFM contains
5 eight primary modules. These are plant and construction, financing, fuel and other
6 clauses, revenue, O&M and amortization, non-regulatory inputs, actuals, and
7 miscellaneous inputs. The CFM takes the inputs previously described and
8 processes them through the modules. It performs certain calculations such as the
9 timing of capital spending going into plant in service, the application of
10 depreciation and AFUDC, the development of balance sheet accounts and cash
11 flow, and the calculation of financing needs. The CFM produces a wide range of
12 management reports at various levels of detail, as well as various control reports.
13 The ultimate output is summary level financial statements for use by management
14 in making decisions and assessing performance. The model also has the capability
15 to create various scenario analyses.

16 **Q. Please describe the process of converting the financial forecast into the rate**
17 **case MFRs and 2007 Schedules.**

18 A. FPL has undertaken a structured process to convert information at the budget
19 activity level (the level at which information is developed by the originating
20 business units and applied in the CFM) into FERC accounts. The CFM includes
21 cost of service identification tags for use by regulatory accounting in creating and
22 reporting retail cost of service and jurisdictional results. Once the final financial
23 forecast is approved, the CFM information by cost of service identifier is

1 electronically forwarded to RIS, which tests the translation to ensure the integrity
2 of the CFM per book forecast information. RIS prepares the Commission
3 adjustments per book, checking the adjustments to history, and incorporates any
4 Company-proposed per book adjustments. The Rate Department provides the
5 jurisdictional separation factors based on detailed allocation factors and a time-
6 tested allocation methodology. The separation factors are updated regularly, most
7 recently in December 2004 for the current forecast. The process used for the
8 forecast is the same process used for the monthly surveillance reporting to the
9 Commission, which is audited periodically. The RIS model also generates the
10 information for a significant portion of the MFRs and 2007 Schedules, thus
11 controlling the preparation of the MFRs and 2007 Schedules and ensuring that the
12 MFRs and 2007 Schedules accurately report the information generated in the
13 forecast.

14 **Q. Please briefly describe the significant other processes that provide inputs to**
15 **the financial forecast model.**

16 **A.** Significant other processes that provide inputs to the financial forecast model
17 include preparation of income tax expense by the Tax Department, preparation of
18 benefit costs by the HR Department, allocations of costs between regulated and
19 non-regulated affiliates by the Accounting Department, and development of
20 financing costs by the Finance Department.

21
22 The Tax Department starts with per book income and income taxes at regular
23 rates, calculates above the line and below the line permanent differences,

1 calculates timing differences, computes current tax expense, computes deferred
2 tax expense, calculates any true up and calculates quarterly tax payments. The
3 process used by the Tax Department assessed the application of both current and
4 new tax treatments, including tax treatment under the Job Creation Act of 2004.

5
6 The HR Department calculates benefit costs for pension, welfare, taxes and
7 insurance based on detailed program costs driven by corporate objectives,
8 approved strategies, performance measures, known changes and events, and
9 financial accounting requirements applied to projected headcount.

10
11 There are three types of fees applicable to services provided by FPL to non-
12 regulated affiliates: affiliate management fees, service fees and direct charges.

- 13 • The Accounting Department calculates the affiliate management fees, which
14 are the allocations of costs between regulated and non-regulated affiliates for
15 corporate staff services that benefit both FPL and its affiliates. The staff
16 business units identify pools of costs for services that provide benefit to
17 affiliates, which the Accounting Department allocates. These pools of costs
18 are allocated to FPL and the affiliates based on widely used allocation
19 formulas such as the Massachusetts Formula; or based on various specific
20 drivers, where more specific driver based allocations are more appropriate.
21 The Massachusetts Formula is based on a simple average of the percentages
22 attributable to the utility and the affiliates of three factors - revenues; gross
23 property, plant and equipment; and total payroll.

- The Accounting Department also calculates the benefit costs that apply to service fees and direct charges that the business units charge to non-regulated affiliates. Power Generation, Energy Marketing and Trading, Integrated Supply Chain, and Nuclear charge service fees to non-regulated affiliates based on the concept of shared services allocations reflecting the level of service with the affiliates. There are also direct charges from FPL business units to non-regulated affiliates based on specific work orders.

The Treasury Department develops financing costs based on confirming financing requirements calculated by parameters in the CFM. These parameters include items such as maintaining a book debt to capital ratio in the upper 30 percent range, and generally keeping commercial paper levels of \$200 million or less. Forecasted interest costs on the financing are taken from the December Blue Chip Forecast, a widely used forecast of interest costs.

In all instances the processes appear to be appropriate and the assumptions are reasonable and consistently applied.

Q. Please describe your review of the other income statement and balance sheet accounts prepared in order to present full forecasted financials.

A. For the various other material income statement and balance sheet accounts, I looked at historical values and trends and considered any accounts with significant changes to determine the reasonableness of assumptions. In all

1 instances the processes used appear to be appropriate and the assumptions
2 reasonable.

3
4 **REVIEW OF THE 2005-2007 FORECAST ASSUMPTIONS**

5 **Q. What is the starting point for the forecast assumptions?**

6 A. In this forecasting cycle, FPL has started with year 2004 results based on eight
7 months of actual and four months of estimated data.

8 **Q. Is the level of detail in the forecast assumptions appropriate?**

9 A. Yes. The 2005 budget year inputs were developed in detail at the budget activity
10 and sub activity level. The 2005 forecast is the basis for FPL's actual plans for
11 that year. For this forecasting cycle, because of the rate case, the years 2006 and
12 2007 were also forecast in considerable detail, though at a somewhat more
13 summary level than for 2005. This is consistent with AICPA guidance for
14 prospective financial information, which recognizes the need for increased
15 summarization of information going farther out in time.

16 **Q. Are the assumptions consistent with FPL's plans?**

17 A. Yes. The assumptions in the three year forecast are consistent with the
18 Company's plans for its business as stated in previous financial filings and public
19 statements including the 2003 Form 10-K filing, analyst presentations, news
20 releases and specific events approved by the FPSC and the State of Florida, such
21 as the FPSC's approval of new generation construction by FPL and the siting
22 approval by the Governor and the Cabinet of the Martin, Manatee, and Turkey
23 Point power plant expansions.

1 **Q. What does your review of the 2005-2007 forecast inputs indicate?**

2 A. My review of the specific forecast inputs for the years 2005 through 2007
3 indicates that the business unit inputs are subject to tracing and verification to
4 source documentation. The fundamental assumptions that are the basis for the
5 inputs appear to be reasonable, based on widely used parameters from well
6 accepted sources. The significant assumptions appear to be consistently applied
7 across the business units. The calculation of adjustments and allocations appear to
8 be materially consistent with the significant assumptions. Inputs are based on
9 relevant information. Recurring base O&M and capital expenditures are based on
10 a combination of specific knowledge and key driver based methods. Project O&M
11 and capital expenditures are based on specific analysis (zero based) methods and
12 specified assumptions. Significant other inputs to the CFM appear to be
13 reasonable. Finally, the CFM accurately incorporates and applies the business
14 inputs. The CFM appears to have the appropriate interrelationships of the data
15 and consistently performs the calculations to generate the summary level financial
16 statements.

17 **Q. Has FPL made any significant new assumptions for the 2005-2007 forecast?**

18 A. Yes. FPL has made two significant new assumptions. For the forecast years 2006
19 and 2007 FPL has increased the assumed base O&M expense for the storm
20 restoration fund contribution to \$120 million from \$20.3 million in 2005. FPL has
21 also assumed a base O&M expense for incremental startup and operating costs for
22 a regional transmission organization (RTO) of \$59 million in the 2006 forecast

1 and \$82 million in the year 2007 forecast. These assumptions are discussed in
2 detail in the testimonies of Messrs. Davis and Stamm.

3 **Q. Has FPL changed its accounting treatment of any items?**

4 A. No. FPL has applied its accounting principles consistent with historic reporting
5 practices. There are two new items in the current forecast, but they do not reflect
6 new accounting principles. FPL's NE division was started in 2004 and so was not
7 previously forecast. FPL has applied a zero separation factor to its NE division
8 costs in calculating jurisdictional revenue requirements. Also, in previous
9 forecasts revenue enhancement revenue less revenue enhancement expense was
10 presented as a net number in non-electric revenues for FPSC purposes. The
11 current forecasts for the years 2006 and 2007 change that treatment and present
12 revenue enhancement revenue and expense separately. This is the way it is
13 reported for financial statement purposes, and FPL has assumed that the FPSC
14 will allow similar regulatory reporting following this rate proceeding. Both of
15 these items are immaterial relative to FPL's overall financial forecast.

16 **Q. During your review did you identify any inconsistencies or potential**
17 **inconsistencies?**

18 A. Yes. I identified certain differences or inconsistencies and potential
19 inconsistencies, which I describe and estimate the impact of below.

- 20 • The HR business unit forecast includes the forecasted benefits cost for all of
21 FPL. The benefits cost was initially developed based on an estimated
22 headcount. The final projected headcount used in the CFM is the sum of the
23 individual business unit forecasts. The forecast benefits cost in the CFM was

1 not updated for the final business unit headcount forecasts. The impact of this
2 difference appears to understate year 2006 forecasted base O&M by
3 approximately \$1.74 million and to understate year 2007 forecasted base
4 O&M by approximately \$0.57 million.

- 5 • The Finance business unit calculates a credit to O&M for the benefits cost to
6 labor that is capitalized. It also calculates an addition to capital costs for the
7 benefits cost of that capitalized labor. Similarly, in calculating the affiliate
8 management fees paid by non-regulated affiliates to FPL, the Finance
9 business unit calculates the charge to the non-regulated affiliates for the
10 benefits cost to labor that is charged to the non-regulated affiliates. These
11 calculations were based on initial assumptions for benefits cost and capitalized
12 labor that changed with the development of the forecasts from the individual
13 business units used in the CFM. The impact of these different assumptions
14 appears to understate year 2006 forecasted base O&M by approximately \$2.68
15 million and to understate year 2007 forecasted base O&M by approximately
16 \$3.72 million. Conversely, the impact of these different assumptions appears
17 to overstate year 2006 forecasted capital cost by approximately \$2.75 million
18 and to overstate year 2007 forecasted capital cost by approximately \$3.44
19 million.

- 20 • The initial calculation of the St. Lucie 2 participation credit was based on
21 applying the ownership percentages of the minority owners to preliminary
22 computations of O&M and capital spending at the plant. Subsequently the
23 Nuclear business unit forecasted O&M and capital spending for the CFM. The

1 subsequent forecast of O&M and capital spending for the CFM differs from
2 the earlier forecast of the participation credit. The impact of the difference
3 appears to understate year 2006 forecasted O&M by approximately \$4.14
4 million and to understate year 2007 forecasted O&M by approximately \$2.09
5 million. Year 2006 forecasted capital cost appears to be overstated by
6 approximately \$5.45 million. Year 2007 forecasted capital cost appears to be
7 overstated by approximately \$22.75 million.

- 8 • There may be some inconsistency between the customer forecast prepared by
9 RAP and the new service accounts (NSA) estimate used by Power Systems as
10 a driver for certain spending items. The relationship between NSAs and net
11 new customers is somewhat different for the forecast years 2006 and 2007
12 than the historical relationship. To assess the effect of this change in the
13 forecast relationship, the historical relationship between NSAs and net new
14 customers was applied to the 2006 and 2007 forecasts. Based on the historical
15 relationship, it appears that forecasted O&M expenses may have been
16 overstated by \$2.54 million in 2006 and \$2.00 million in 2007, and capital
17 expenditures may have been overstated by \$18.66 million in 2006 and \$14.68
18 million in 2007.
- 19 • The calculation of uncollectible expense was based on initial estimates of total
20 revenue that were lower than the total revenue in the final forecast used in the
21 CFM. As a result, uncollectible expense appears to be understated and so base
22 O&M appears to be understated. The effect of this difference appears to

1 understate 2006 forecasted O&M by approximately \$1.38 million and to
2 understate 2007 forecasted O&M by approximately \$0.59 million.

3
4 Document No. MEB-4 summarizes the effect of each of these differences on 2006
5 and 2007 O&M and capital spending, as well as the revenue requirement effect.
6 While the impacts on O&M directly translate into revenue requirement impacts,
7 this is not the case for the impacts on capital spending. Rather, the effect of
8 changes in capital spending on revenue requirements is the sum of the return on
9 that portion of the capital spending that is in rate base plus the depreciation
10 expense on that portion of the capital spending that is removed from rate base and
11 depreciated. The factor that relates capital spending to revenue requirements is
12 approximately 15%, which has been used to estimate the revenue requirement
13 effect. Document No. MEB-4 shows the impact on the financial forecast of these
14 differences and potential inconsistencies in assumptions. All of the individual
15 impacts on revenue requirement are under \$5 million, or less than 0.2% of
16 forecast base revenue, and the cumulative effect of the impacts is an estimated
17 potential understatement of the revenue requirement of approximately \$3.37
18 million in 2006 and an estimated potential overstatement of approximately \$1.16
19 million in 2007. Thus the differences or potential inconsistencies are immaterial
20 individually and in total.

1 **Q. During your review did you identify any misclassifications or potential**
2 **misclassifications?**

3 A. Yes. I identified two apparent misclassifications. First, approximately \$3.94
4 million in 2006 appeared to be misclassified as power supply costs rather than
5 administrative and general expenses. Since both of these items are part of O&M
6 there was no impact on the financial forecast or the revenue requirement
7 developed using the financial forecast. Second, approximately \$0.20 million in
8 2006 of hedging financing expense was properly reflected in the financial forecast
9 as recoverable under the Fuel Clause, but was improperly coded as incremental
10 hedging cost. Starting in 2006, FPL is proposing to recover its test year level of
11 incremental hedging cost through base rates, with only the excess (if any) above
12 that test year level to be recovered through the Fuel Clause. A Company
13 adjustment was made to recover through base rates the test year hedging finance
14 expense that had been misclassified as incremental hedging cost, with the result
15 that the 2006 and 2007 test year O&M expenses were overstated by an immaterial
16 \$0.20 million for the purpose of determining revenue requirements. Thus, the total
17 dollar amount of the financial forecast was correct with respect to the hedging
18 financing expense, but the Company adjustment was premised upon this
19 misclassification and should not have been made.

20 **Q. Have you reviewed the Company proposed adjustments presented in the**
21 **testimony of K. Michael Davis?**

22 A. I have confirmed the current treatment of the items proposed for adjustment and I
23 have reviewed the proposed adjustments conceptually. Based on this review, I

1 believe that the Company's proposed adjustments are reasonable, with the
2 exception of the adjustment for incremental hedging costs discussed above.

3
4 **REVIEW OF HISTORICAL PERFORMANCE OF THE FINANCIAL**
5 **FORECASTING PROCESS AND ACCOUNTABILITY FOR**
6 **PERFORMANCE**

7 **Q. How does FPL test its historical performance against forecast?**

8 A. As part of the budget and forecast process, FPL business units create key
9 performance measures. These measures, as well as the forecast inputs, are
10 compared to actual results on a monthly basis.

11
12 The budget inputs are the basis for accountability. The budgets are prepared at a
13 section or location level by the appropriate personnel. These section or location
14 budgets are combined into departmental and then business unit level budgets. The
15 budgets are reviewed and approved by department and then business unit
16 management. Ultimately the budgets are reviewed and approved by FPL
17 management. The comparison of budget to actual follows the same line of
18 reporting.

19 **Q. What analyses of the forecast comparisons have you performed?**

20 A. I reviewed forecast-to-actual results for 2002, 2003 and 2004. The results are
21 summarized in Document No. MEB-5. The following are my general
22 observations:

- FPL accurately forecasted O&M spending for 2002, 2003 and 2004. The aggregate base O&M forecast, after adjustment for unique and unplanned events, differed from actual during 2002-2004 by 0.8% or less as a percent of base revenue as shown following.

<u>Year</u>	<u>O&M Variance</u>
2002	0.8%
2003	(0.3)%
2004	(0.1)%

The specific adjustments were to exclude:

- A one-time \$35 million addition to the storm fund reserve approved by the FPSC in 2002.
- The increase in Nuclear business unit spending above forecast in 2003, which was significantly affected by Nuclear Regulatory Commission orders in 2003 requiring more extensive inspections.

Both of these items were discussed in FPL Group Inc.'s 2003 Form 10-K filing. Excluding these two items, no operating or staff business unit had a variance between forecast and actual greater than 0.6% of base revenue, and most variances were 0.3% or less. Further, even if these items are included, actual O&M varied from forecast by 1.8% in 2002, 1.1% in 2003 and (0.1)% in 2004.

- Capital spending forecasts are subject to greater fluctuations between forecast and actual due to the potential impact of timing changes in major project

spending. Nonetheless, for all three years 2002, 2003 and 2004 FPL's aggregate capital spending differed from actual by less than 3% as a percent of base revenue. Further, as noted previously the effect of changes in capital spending have a smaller effect on the revenue requirement, on the order of 15%. Thus the revenue requirement effects of the fluctuations between forecast and actual capital spending as a percent of base revenue are less than 0.5% (i.e., 15% of 3%).

CONCLUSIONS

Q. Please summarize your testimony.

A. Based on the review described in my testimony, it is my opinion that the financial forecasting process used by FPL is in conformity with the AICPA guidelines in all material respects. The process for the preparation of the FPL financial forecast was comprehensive. The significant assumptions used to develop the financial forecast were reasonable, and the data used in applying those assumptions was materially consistent throughout the forecast. The FPL financial forecast represents an accurate simulation of the test period financial results, should the significant assumptions prove true.

Q. Does this conclude your direct testimony?

A. Yes.

1 **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

2 **FLORIDA POWER & LIGHT COMPANY**

3 **DIRECT TESTIMONY OF JOHN H. LANDON, PH.D.**

4 **DOCKET NO. 050045-EI**

5 **MARCH 22, 2005**

6
7 **Q. Please state your name and business address.**

8 A. My name is John H. Landon, and my business address is Two Embarcadero
9 Center, Suite 1750, San Francisco, California, 94111.

10 **Q. By whom are you employed and what is your current position?**

11 A. I am a Managing Principal of Analysis Group, Inc. (Analysis Group), an
12 economic and business strategy consulting firm.

13 **Q. Please describe your educational background and professional experience.**

14 A. I received a B.A. degree with highest honors from Michigan State University with
15 a major in economics in 1964. I subsequently completed graduate school at
16 Cornell University, where I was awarded an M.A. in economics in 1967 and a
17 Ph.D. in the same field in 1969.

18
19 After leaving Cornell University, I served on the faculty of Case Western Reserve
20 University from 1968 to 1973, rising from the rank of assistant professor to
21 associate professor, and on the faculty of the University of Delaware from 1973 to
22 1977 as an associate professor. I taught regulatory economics, microeconomics,
23 industrial organization, antitrust economics, and economic forecasting.

1 After leaving the University of Delaware, I was employed by National Economic
2 Research Associates (NERA) from 1977 to 1997 first as a Senior Consultant, and,
3 eventually, as a Vice President, a Senior Vice President, and finally as a member
4 of the Board of Directors. I joined Analysis Group in March of 1997.

5
6 My curriculum vitae is attached to my testimony as Document No. JHL-2.

7 **Q. Please briefly outline your electric utility-related background.**

8 A. I studied regulatory economics both as an undergraduate (Michigan State with Dr.
9 Joel Dirlam) and as a graduate student (Cornell University with Dr. Alfred Kahn).
10 I was one of the graduate assistants who provided research assistance for Dr.
11 Kahn as he wrote his seminal work, *Economics of Regulation*. As a faculty
12 member at Case Western Reserve University and the University of Delaware, I
13 taught regulatory economics and authored or co-authored several articles and
14 book chapters focused on economic aspects of the electric utility industry.

15
16 In my more than 27 years of practice as an economic consultant, I have spent the
17 majority of my time on issues involving the application of economic principles to
18 the electric utility industry. I have participated in numerous projects addressing
19 economic and related antitrust issues before the Federal Energy Regulatory
20 Commission (FERC), the Nuclear Regulatory Commission (NRC), the Securities
21 and Exchange Commission (SEC), state regulatory commissions, and federal and
22 state courts.

1 **Q. Have you previously testified as an expert on the electric utility industry?**

2 A. Yes. I have testified on many occasions before state and federal courts and
3 regulatory agencies on a variety of matters relating to the electric utility industry.
4 These matters include: expense and service level benchmarking, merger benefits,
5 deregulation, affiliate relations, competition and market power, rate making,
6 performance-based regulation, transmission governance, demand-side
7 management, cost allocation and pricing.

8 **Q. Before which state regulatory commissions have you testified?**

9 A. I have provided testimony before the state regulatory commissions of Arkansas,
10 Arizona, California, Delaware, Florida, Illinois, Iowa, Louisiana, Maryland,
11 Massachusetts, Michigan, Minnesota, Missouri, Montana, Nevada, New Jersey,
12 New Mexico, New York, Ohio, Oklahoma, Pennsylvania, Texas, Vermont, and
13 West Virginia.

14 **Q. Do you have experience benchmarking performance in the electric utility**
15 **industry?**

16 A. Yes. I have substantial experience in benchmarking operating, financial,
17 customer service, and other performance measures of electric utilities.

18

19 • Nevada Power & Sierra Pacific Power 2004 General Rate Case: I
20 benchmarked the companies' non-fuel operation and maintenance (O&M)
21 expenses against a comparable group of electric utilities. I also benchmarked
22 various measures of reliability and service quality against the companies' own
23 past performance.

1 • Central & Southwest Corporation/El Paso Electric: I developed external
2 benchmarks for projected expenses in several areas including production,
3 financing, labor, O&M, and corporate overhead. I provided testimony before
4 the FERC on the results of my benchmarking study.

5
6 • Tucson Electric v. Southern California Edison: I developed external
7 benchmarks for projected operating expenses.

8
9 • Bell Atlantic/GTE: I conducted a benchmarking study of expected operating
10 expenses. As part of this benchmarking study, I examined the financial
11 performance of several combined electric utilities. I testified before the
12 California Public Utilities Commission regarding the results of my
13 benchmarking study.

14
15 • I have reviewed actual or proposed performance benchmarks in Maryland,
16 Delaware, Illinois, Iowa, Virginia, Texas, Ohio, New Mexico, and
17 Massachusetts.

18 • I have written and testified on the role of vertical integration and economies of
19 scale and scope on performance.

20 **Q. Are you sponsoring an exhibit in this case?**

21 **A.** Yes. I am sponsoring an exhibit consisting of 18 documents, which are listed in
22 Document No. JHL-1.

- 1 • At the same time that FPL has been successful in keeping its costs low, it has
- 2 been providing its customers with levels of electric reliability and customer
- 3 service that exceed industry averages.
- 4 • The Company's 2006 and 2007 forecasts for total non-fuel O&M expenses are
- 5 below the 2003 benchmark averages, the last year for which data on the
- 6 comparison companies are available.
- 7 • The benchmark analyses sponsored by FPL witnesses Mr. Stall, Mr. Yeager,
- 8 Ms. Williams, Mrs. Santos, and Mr. Escoto are appropriate and reasonable.

10 FPL'S BENCHMARKING STUDIES

11 **Q. Please define benchmarking.**

12 **A.** Benchmarking is a measurement technique that compares the business
13 performance and practices of a company to those of a peer group. This technique,
14 which companies rely on to evaluate operational and financial performance, is
15 used to assess high-level company performance as well as the performance of
16 specific activities. By benchmarking various aspects of performance, a company
17 is able to develop a view of how well it is performing relative to its peers.

18
19 There are two principal steps involved in benchmarking. In order to compare the
20 performance of a company to the performance of other companies in the
21 benchmark group, it is first necessary to determine whether the financial or
22 performance measure at issue can be directly compared across companies, or
23 whether a common means of measurement must be established. For example,

1 because total production costs vary based on the number of customers served,
2 among other factors, this financial measure must be normalized – transformed
3 into a common unit of measurement – before a meaningful comparison can be
4 made between the subject company’s performance and the performance of
5 companies in the benchmark group. For production costs, a commonly used
6 normalization measure is the total cost per unit of production. For a vertically
7 integrated electric utility such as FPL, a typical comparable measure would be
8 total cost per kWh sold. It is sometimes appropriate to compare costs in relation
9 to the number of customers served. In contrast to financial performance
10 measures, service level measures, such as availability factors or forced outage
11 rates, often are calculated in units of measurement that can be compared directly
12 across utilities without the need for any further normalization.

13
14 After a common basis of comparison has been established, it is necessary to
15 construct an appropriate panel of companies against which financial or service
16 level performance can be compared – the benchmark group. The criteria by
17 which companies are selected for inclusion in the benchmark group will depend
18 upon the objective of the benchmarking exercise. For example, one objective of a
19 benchmarking study may be to evaluate the Company’s performance relative to
20 the electric industry broadly. In this case, it is necessary to create a benchmark
21 group that is based on a meaningful screen for comparability and yet includes a
22 large number of companies. It also may be informative to compare the subject
23 company’s performance to additional benchmark groups comprised of fewer

1 companies who closely resemble the subject company in certain aspects. The
2 intent of FPL's benchmarking is to derive a high-level evaluation of the
3 Company's performance.

4 **Q. What was your role in the development of a benchmarking study of FPL's**
5 **costs?**

6 A. I was involved in the development of the Company's plans for conducting a
7 benchmarking study of non-fuel O&M expenses, and gross plant. Based on my
8 review of the Company's prior benchmarking analysis, I provided guidance to
9 FPL on the proper approach to benchmarking, including metrics, data sources,
10 and composition of the benchmark groups. I also evaluated the reasonableness of
11 the Company's service level benchmarks.

12 **Q. What was your role in evaluating the benchmarking studies of FPL's service**
13 **level measures?**

14 A. I have reviewed benchmarking studies of FPL's nuclear and fossil plant
15 operational performance and distribution system reliability. I also have evaluated
16 the reasonableness of benchmark studies of various service level measures that
17 appear in the testimony of other FPL witnesses.

18 **Q. Why is it important to benchmark both cost and service level performance?**

19 A. Because a certain level or quality of service has an associated cost, these two
20 components are interdependent. In evaluating one component, it is necessary to
21 assess the other as well. Customers benefit from high service levels. However, if
22 the expenses incurred to achieve such levels are too high, the benefits to
23 consumers from better service may be offset by the increased cost of service.

1 Similarly, although consumers will benefit from lower rates if costs are driven
2 down, if the cost reductions also result in inadequate service quality, the net result
3 may not benefit consumers.

4 **Q. What is the appropriate time frame in which to benchmark a company's**
5 **financial or operational performance?**

6 A. It is desirable to look at long-term trends in cost management and operational
7 performance, so as to minimize the effects of random events that are outside of
8 the utility's control that may affect a single year's results. A multi-year average is
9 a more reliable measure of long-term performance than a single-year observation.
10 FPL and the companies in the benchmark group are subject to random events that
11 affect their performance in any particular year. FPL has examined performance
12 over a six-year period starting with 1998, the year before FPL's first revenue
13 sharing plan. This provides an extended period during which the current
14 regulatory treatment of the Company has been in place.

15 **Q. Please describe the general structure of FPL's benchmarking analysis.**

16 A. The Company has benchmarked financial and service measures for the period
17 1998 through 2003. Although 2004 data are available for FPL, they generally are
18 not available for the benchmark companies at this time. Expense and other
19 financial data are obtained from the FERC Form 1. Data for the comparison
20 companies in the service level benchmarks are obtained from industry groups and
21 consulting firms that collect it. I discuss the results of the analyses in terms of
22 absolute and percentage differences between FPL and the benchmark groups.

23

1 I first discuss the results of the benchmarking of cost measures. I then discuss my
2 evaluation of the benchmarking of selected service level measures. These service
3 level measures are broad, high-level indicators of FPL's performance. Finally, I
4 comment on any additional benchmarks included in the testimony of other
5 Company witnesses.

6
7 **FPL'S COST PERFORMANCE**

8 *FPL's Non-Fuel Operation and Maintenance Expenses*

9 **Q. Have the Company's expense levels been benchmarked relative to other**
10 **utilities?**

11 A. Yes. FPL's total non-fuel O&M expenses have been compared to the non-fuel
12 O&M expenses of a benchmark group of electric utilities. Fuel and purchased
13 power expenses have been excluded from the O&M expense measure.

14 **Q. What criteria were used to construct the benchmark group?**

15 A. The proper analytical approach for a benchmarking study is to populate the
16 comparison group with firms that resemble the subject firm. To that end, all
17 electric utilities with more than 500,000 retail customers in 2003 are considered
18 comparable for the purpose of benchmarking total non-fuel O&M expenses. FPL
19 had 4.1 million retail customers in 2003. From this group, utilities were excluded
20 if a major divestiture of generation had occurred during the study period. The
21 resulting benchmark group contains 34 electric utility operating companies. It is
22 also useful in some instances to compare performance to alternative benchmark
23 groups based on different inclusion criteria, such as geography or a more narrow

1 definition of comparable scale. I discuss the results of alternative benchmark
2 comparisons for non-fuel O&M expenses, and the other financial measures that
3 have been benchmarked, later in my testimony. The benchmark groups for these
4 various comparisons are shown on my Document No. JHL-3.

5 **Q. What data were used in the expense benchmarking?**

6 A. For FPL and the benchmark group, expense data for the period 1998 through 2003
7 were collected from the publicly available expense data reported to the FERC
8 through the Form 1. All electric utilities subject to FERC jurisdiction are required
9 to report O&M expenses following standard accounting procedures. In addition
10 to data for the 1998-2003 period obtained from FERC, actual expense data for
11 2004 and forecasts for 2005-2007 also were available for FPL.

12 **Q. What are the results of the expense benchmarking?**

13 A. The benchmarking shows that FPL has been successful in reducing non-fuel
14 O&M expenses per customer between 1998 and 2003, and that it has performed
15 significantly better than the benchmark group in doing so.

16
17 FPL's total non-fuel O&M, normalized by the number of customers, declined
18 from \$315 in 1998 to \$303 in 2003. In contrast, the average non-fuel O&M
19 expenses per customer for the benchmark group increased from \$494 in 1998 to
20 \$539 in 2003. FPL's non-fuel O&M expenses per customer were 41% lower than
21 the benchmark group over that six-year period. Moreover, FPL's non-fuel O&M
22 expenses declined to \$291 per customer in 2004. These results are shown on my
23 Document No. JHL-4.

1 FPL's non-fuel O&M expenses per customer are consistently well below the
2 average for the comparison group throughout the six-year comparison period.
3 This large gap is strong evidence of FPL's consistent record of success in
4 controlling non-fuel O&M expenses, but it tends to obscure how FPL performed
5 relative to the benchmark group over just the six-year period of the analysis.
6 Therefore, in order to focus more on the relative change in non-fuel O&M
7 expenses per customer over the six-year period, FPL's non-fuel O&M expenses,
8 indexed to their 1998 levels, are compared to the indexed average for the
9 benchmark group. That is, the 1998 expenses for both FPL and the benchmark
10 group are shown as 100%, with the subsequent years as percentage changes from
11 those 1998 levels. My Document No. JHL-5 shows that FPL has outperformed
12 the benchmark group on this indexed basis. Whereas the average expense per
13 customer for the benchmark has risen above the 100% index, FPL's expense per
14 customer has remained steadily below 100%. In other words, the benchmark
15 group has seen its average non-fuel O&M expense per customer increase by 9.0%
16 between 1998 and 2003, while FPL's has declined by 3.7%. The Company's
17 indexed non-fuel O&M per customer fell again in 2004.

18
19 FPL's non-fuel O&M expenses also were compared to the benchmark group with
20 the expenses normalized on the basis of kWh sales rather than the number of
21 customers. Again, FPL compares very favorably. My Document No. JHL-6
22 shows that FPL's non-fuel O&M expenses per kWh declined 7.8%, from 1.36¢ in
23 1998 to 1.26¢ in 2003, while the benchmark group rose 10.9%, from 1.60¢ to

1 1.78¢ over that period. On average, FPL's non-fuel O&M expenses per kWh
2 were 22% lower than the benchmark group's over the six-year period. The
3 Company's non-fuel O&M per kWh fell slightly between 2003 and 2004.

4 **Q. Have you reviewed the trend in FPL's non-fuel O&M expenses before 1998?**

5 A. Yes. I have looked at the trend of non-fuel O&M expenses beginning in 1991, the
6 first year of the Company's major cost reduction initiative, and continuing
7 through 2004. The data demonstrate that the Company has achieved consistent
8 and substantial reductions in non-fuel O&M expenses over that period. Between
9 1991 and 2004, FPL's non-fuel O&M expenses per customer have fallen 31%,
10 which is 3% annually on a compounded basis.

11
12 FPL's success in reducing costs is all the more impressive inasmuch as the
13 Company has experienced very rapid growth over the same period. Between
14 1991 and 2004, FPL grew by 31%, adding almost 1 million new customers. As
15 Mr. Green mentions in his testimony, FPL has added 1.6 million customers over
16 the past 20 years. FPL's customer growth over the past two decades is equivalent
17 to the total customer base of some of the largest U.S. utilities and only 12 other
18 utilities had more than 1.6 million customers in 2003.

19 **Q. Has FPL forecasted non-fuel O&M expenses for 2006 and 2007?**

20 A. Yes. As part of the Company's filing in this rate case, it has forecasted total non-
21 fuel O&M expenses, total customers, and total kWh sales for 2006 and 2007.

1 **Q. How do FPL's forecasted non-fuel O&M expenses for 2006 and 2007**
2 **compare to the benchmark group in the last year for which data are**
3 **available?**

4 A. The most recent year for which data on the benchmark companies are available is
5 2003. FPL's per-customer and per-kWh non-fuel O&M forecasts for 2006 and
6 2007 are below the benchmark averages for 2003. This is shown on my Document
7 Nos. JHL-4 and JHL-6.

8 **Q. Have the benefits to FPL customers from the Company's cost reduction**
9 **efforts been quantified?**

10 A. Yes. Forecasts of FPL's total non-fuel O&M expenses were prepared as if the
11 Company (hypothetically) operated at the average expense level of the benchmark
12 group. For 2003, if FPL operated at the expense level of the average peer utility
13 in the benchmark group, the Company would have incurred additional non-fuel
14 O&M expenses of at least \$500 million, 40% more than actual 2003 expense
15 levels.

16

17 *FPL's Capital*

18 **Q. Has a measure of FPL's total capital investment been compared to the**
19 **capital investments of other utilities?**

20 A. Yes. In assessing the Company's overall financial performance, from the
21 customers' perspective, it is helpful to examine both non-fuel O&M and capital
22 costs. This is important because tradeoffs can be made between the two. For
23 example, a utility could choose to make greater capital investments that might

1 lower non-fuel O&M costs. Conversely, a utility that reduced its capital
2 expenditures might experience relatively higher non-fuel O&M costs.

3
4 For the period 1998 through 2003, FPL's total capital investment – as measured
5 by gross plant reported in the FERC Form 1 – normalized for number of
6 customers served and by kWh sold, was compared to a benchmark group
7 consisting of the same 34 utilities identified in the non-fuel O&M expense
8 benchmark exercise.

9 **Q. What are the results of the benchmarking of gross plant?**

10 A. FPL again compares very favorably to the benchmark group. My Document Nos.
11 JHL-7 and JHL-8 show, respectively, the gross plant per customer and gross plant
12 per kWh for FPL and the benchmark group over the period 1998-2003. FPL's
13 capital costs are consistently below the benchmark group throughout this period
14 by both measures. Between 1998 and 2003, FPL's average gross plant per
15 customer was approximately \$2,200 less than the benchmark average, a 30%
16 lower level of gross plant. Over the same period, FPL's average gross plant per
17 kWh sold was 1.37¢ (6%) lower than the benchmark average. This suggests that
18 the Company has been able to employ capital more efficiently, on average, than
19 the benchmark group. Moreover, FPL's gross plant per customer has increased
20 only 11.6% over the 1998-2003 period while the benchmark group experienced a
21 12.9% increase. Similarly, FPL's gross plant per kWh went up only 6.8% over
22 that period, compared to the benchmark group's 14.2% increase. The Company's

gross plant per customer fell 0.3% in 2004, to \$5,134; gross plant per kWh increased 2.7% to 21.89¢.

Q. Has FPL forecasted gross plant for 2006 and 2007?

A. Yes. As part of the Company's filing in this rate case, it has forecasted gross plant for 2006 and 2007.

Q. How do FPL's gross plant forecasts for 2006 and 2007 compare to the benchmark group in the last year for which data are available?

A. The most recent year for which data on the benchmark companies are available is 2003. As one can see on my Document Nos. JHL-7 and JHL-8, FPL's 2006 and 2007 gross plant forecasts, on a per-customer and a per-kWh basis, are below the benchmark averages for 2003.

Q. Does FPL's O&M and gross plant benchmarking suggest a more efficient use of capital?

A. Yes. As I will discuss later in my testimony, the Company's benchmarking indicates that it has improved service levels over the past several years and has delivered a higher level of service, on average, than other comparable utilities. At the same time, the Company has reduced both expense levels and capital costs compared to its peers.

Sensitivities

Q. Were any supplemental analyses conducted?

A. Yes. To test the sensitivity of the benchmarking results to the composition of the comparison group, three alternative benchmark groups were constructed.

1 To determine whether the Western energy crisis had any effect on the
2 benchmarking results, non-fuel O&M expenses and gross plant were compared to
3 a benchmark group of utilities with more than 500,000 customers, excluding all
4 utilities in the Western Electricity Coordinating Council (WECC) region. The
5 WECC is the westernmost of the 10 North American Electric Reliability Council
6 (NERC) regional reliability councils. The WECC covers 13 western U.S. states.
7 NERC is a non-profit organization that establishes voluntary reliability and
8 resource planning standards and monitors and enforces compliance with its
9 standards. NERC's members are the ten Regional Reliability Councils whose
10 members, in turn, come from all segments of the U.S. electric industry including
11 investor-owned utilities, federal and state power agencies, rural electric
12 cooperatives, and municipal utilities.

13
14 To determine if local or regional conditions such as the economy or geography
15 might influence the overall results, an additional benchmark group of regional
16 utilities that operate in the Southeast was created.

17
18 A third alternative benchmark group, comprised of holding companies with more
19 than 2 million customers in 2003, also was created to test whether the Company's
20 perceived scale economies may have biased the benchmark study. FPL had 4.1
21 million retail customers in 2003.

1 **Q. Please briefly describe the results of the sensitivity tests.**

2 A. The results of sensitivities based on the three alternative panels I have described
3 are shown on my Document Nos. JHL-9 through JHL-12. The results generally
4 are qualitatively identical to the underlying benchmark study. This demonstrates
5 that the results of the comparison of FPL's cost performance to the larger
6 benchmark group I discussed earlier in my testimony are reasonable and robust.

7

8

FPL'S SERVICE LEVEL PERFORMANCE

9 **Q. Were broad measures of service level benchmarked, in addition to the cost**
10 **benchmarking?**

11 A. Yes. As I discussed previously, to deliver the most value to the Company's
12 customers, FPL must achieve a balance between the costs incurred to provide
13 service and service quality. Although customers benefit from high service levels,
14 if the cost of service is too high the benefits to customers from better service may
15 be more than offset by the increased cost of service. Conversely, although
16 reduced costs will benefit customers through lower rates, if the cost reductions
17 also result in insufficient service quality, the net result may not benefit consumers.
18 In this section I discuss my review of the benchmarking of several high-level,
19 comprehensive service level measures. In a subsequent section I discuss my
20 review of service level benchmarking studies for specific functional areas that
21 appear in the testimony of several Company witnesses.

1 **Q. What service level benchmarking did you review?**

2 A. I reviewed the benchmarking of measures of generation reliability for FPL's
3 nuclear and fossil plants and the distribution System Average Interruption
4 Duration Index (SAIDI), a measure of distribution system performance. The
5 Company regularly uses these benchmark measures to evaluate the performance
6 of individual business units. Moreover, regulators, including the Florida Public
7 Service Commission, frequently use these (or comparable) benchmarks in their
8 evaluation of utility performance.

9

10 *Nuclear Generation Reliability and Performance*

11 **Q. What measures of nuclear plant reliability and operating performance did**
12 **you examine?**

13 A. I reviewed a benchmark study of operating performance as measured by the
14 World Association of Nuclear Operators (WANO) index. I also reviewed
15 benchmark studies of the unit capability factor and forced loss rate of FPL's
16 nuclear plants.

17 **Q. Please describe the results of FPL's benchmarking of the WANO index.**

18 A. WANO is a non-profit, non-regulatory organization comprised of every
19 organization in the world that operates a nuclear electricity generating plant.
20 WANO's objectives include improving nuclear plant safety, reliability and
21 performance levels. The WANO index is a composite of several individual
22 performance measures tracked by WANO. FPL's WANO index score was
23 benchmarked against a comparison group comprised of all U.S. nuclear

1 generation plants with two or more units, between 1998 and 2003. The multiple-
2 unit screen on the benchmark group is more stringent because multiple-unit
3 nuclear facilities tend to perform better than single unit facilities for many
4 reasons. For example, multiple-unit sites can enjoy greater economies of scale
5 than single unit sites. In addition, multiple-units at the same site may enable the
6 utility to more readily learn about and improve operating practices. The following
7 results are shown graphically on my Document No. JHL-13.

8
9 The WANO index is measured on a percentage point scale. The value that
10 indicates best performance is 100%. The Company's nuclear plants have
11 performed much better than the benchmark group throughout the study period, as
12 measured by the WANO index. For example, FPL's 2003 WANO score was
13 95.6%, 4.9% better than the benchmark average of 91.1%. Over the most recent
14 three-year period, 2001-2003, FPL's average WANO score was 98.1%, 6.8%
15 better than the benchmark average of 91.9%. Over the full study period, 1998-
16 2003, FPL's average WANO score was 97.5%, 7.3% better than the benchmark
17 average of 90.9%. For every year during the period 1998-2003, FPL's WANO
18 score was between 4.5 and 9.9 percentage points better than the benchmark
19 average.

20
21 As Mr. Stall discusses in his testimony, FPL's nuclear plants recently have
22 experienced challenges that have negatively impacted the Company's WANO
23 index in the 2003-2004 period. Nevertheless, the Company's WANO score

1 improved slightly in 2004, to 95.7%. Mr. Stall compares the WANO scores of
2 FPL's individual nuclear units to other comparable units that have faced similar
3 challenges. He concludes that the Company's performance is comparable to other
4 utilities facing similar challenges.

5 **Q. Please describe the results of FPL's benchmarking of the nuclear unit**
6 **capability factor.**

7 A. FPL benchmarked the aggregate unit capability factor of its nuclear plants against
8 a benchmark group comprised of all regulated U.S. nuclear generation plants.
9 The source of FPL's data for the benchmark group was the Institute of Nuclear
10 Power Operations (INPO). INPO is a non-profit, non-regulatory industry
11 organization that collects cost and performance data for electric utilities. All U.S.
12 organizations that operate commercial nuclear power plants are INPO members.
13 The following results are shown graphically on my Document No. JHL-14.

14
15 The unit capability factor is measured on a percentage point scale. The value that
16 indicates best performance is 100%. The unit capability factor benchmark
17 indicates that FPL's nuclear plants have performed better than other utilities. The
18 unit capability factor for FPL's nuclear plants was 91.5% in 2004, whereas the
19 benchmark average was 90.3%. Over the most recent three-year period, 2002-
20 2004, FPL's average nuclear unit capability factor was 92.5%, whereas the
21 benchmark average was 90.0%. Over the 7-year study period, 1998-2004, FPL's
22 average unit capability factor was 92.4%, whereas the benchmark average was

1 87.0%. For every year during the period 1998-2004, FPL's unit capability factor
2 was between 1.1 and 14.1 percentage points above the benchmark average.

3 **Q. Please describe the results of FPL's benchmarking of the nuclear forced loss**
4 **rate.**

5 **A.** FPL benchmarked the aggregate forced loss rate of its nuclear plants against a
6 benchmark group comprised of all regulated U.S. nuclear generation plants,
7 between 1999 and 2004. The source of FPL's data for the benchmark group was
8 INPO. Data for the benchmark group for 1998 were not available. The following
9 results are shown graphically on my Document No. JHL-15.

10
11 The forced loss rate is measured on a percentage point scale. The value that
12 indicates best performance is 0%. The Company's nuclear forced loss rate
13 compares very favorably to the benchmark group. The forced loss rate for FPL's
14 nuclear plants was 2.2% in 2004, whereas the benchmark average was 2.3%.
15 Over the most recent three-year period, 2002-2004, FPL's average nuclear forced
16 loss rate was 1.6%, whereas the benchmark average was 2.5%. Over the full
17 study period, 1999-2004, FPL's average forced loss rate was 1.4%, whereas the
18 benchmark average was 3.7%. For every year during the period 1999-2004, FPL's
19 forced loss rate was between 0.1 and 5.2 percentage points below the benchmark
20 average.

21

Fossil Generation Reliability and Performance

Q. What measures of reliability and operating performance did FPL use for its fossil plants?

A. FPL benchmarked the Equivalent Availability Factor (EAF) and the Equivalent Forced Outage Rate (EFOR) of its fossil plants.

Q. Please describe the results of FPL's benchmarking of the fossil EAF.

A. Because there are efficiencies of scale and scope, and a large comparison group is more reliable, FPL benchmarked the aggregate EAF of its fossil plants, weighted by capacity, against a benchmark group comprised of all U.S. utilities with more than 5,000 MW of owned capacity and an aggregate capacity factor greater than 25%. The EAF excludes maintenance outages. The source of FPL's data for the benchmark group was NERC. The following results are shown graphically on my Document No. JHL-16.

The EAF is measured on a percentage point scale. The value that indicates best performance is 100%. FPL's fossil plants demonstrated superior performance, relative to the benchmark group. The EAF for FPL's fossil plants was 90.1% in 2003, whereas the benchmark average was 84.9%. Over the most recent three-year period, 2001-2003, FPL's average fossil EAF was 92.8%, whereas the benchmark average was 85.3%. Over the full study period, 1998-2003, FPL's average EAF was 93.3%, whereas the benchmark average was 85.1%. For every year during the period 1998-2003, FPL's EAF was between 5.2 and 9.5

percentage points above the benchmark average. The Company's fossil EAF improved in 2004 to 93.7%.

Q. Please describe the results of FPL's benchmarking of the fossil EFOR.

A. FPL benchmarked the aggregate, capacity-weighted EFOR of its fossil plants against a benchmark group comprised of the same U.S. utilities used in the EAF benchmark. The following results are shown graphically on my Document No. JHL-17.

The EFOR is measured on a percentage point scale. The value that indicates best performance is 0%. Similar to the fossil EAF benchmark, FPL's fossil EFOR compared very favorably to the comparison group. The EFOR for FPL's fossil plants was 3.0% in 2003, whereas the benchmark average was 8.7%. Over the most recent three-year period, 2001-2003, FPL's average fossil EFOR was 2.3%, whereas the benchmark average was 8.1%. Over the full study period, 1998-2003, FPL's average EFOR was 2.1%, whereas the benchmark average was 8.2%. For every year during the period 1998-2003, FPL's EFOR was between 5.3 and 6.9 percentage points below the benchmark average. The Company's fossil EFOR improved in 2004 to 1.1%.

Distribution System Reliability

Q. What measure of distribution system reliability did FPL benchmark?

A. FPL benchmarked SAIDI, which is a comprehensive measure of customers' average annual outage time. SAIDI captures both the duration and frequency of

1 interruption, or total number of minutes of interruptions, experienced by a typical
2 customer.

3 **Q. Please describe the results of FPL's benchmarking of SAIDI.**

4 A. FPL compared its SAIDI measures against a benchmark group comprised of all
5 U.S. utilities responding to the Edison Electric Institute's Distribution Reliability
6 Survey. The following results are shown graphically on my Document No. JHL-
7 18.

8
9 The unit of measurement for SAIDI is the total annual duration of service
10 interruptions, measured in minutes, experienced by the average customer. FPL
11 has demonstrated considerably higher distribution reliability, as measured by
12 SAIDI, relative to the comparison group. FPL's SAIDI was 68.2 minutes in
13 2003, whereas the benchmark average was 137.8 minutes. Over the most recent
14 three-year period, 2001-2003, FPL's average SAIDI was 68.7 minutes, whereas
15 the benchmark average was 140.9 minutes. Over the full study period, 1998-
16 2003, FPL's average SAIDI was 75.3 minutes, whereas the benchmark average
17 was 124.9 minutes. In 1998 FPL's SAIDI was 1.2 minutes shorter than the
18 benchmark average. For every year during the period 1999-2003, FPL's SAIDI
19 was between 35.6 and 83.5 minutes shorter than the benchmark average. FPL's
20 SAIDI also has improved by 32% over the study period. The Company's SAIDI
21 score rose slightly in 2004, to 69.7 minutes.

1 **Q. Are FPL's SAIDI results affected by anomalies caused by unique local**
2 **conditions or random localized events?**

3 A. FPL is a very large and diverse system. Thus the impact of a localized random
4 event in the FPL service territory is unlikely to affect the Company's aggregate
5 performance. Moreover, the design of FPL's benchmarking analysis limits the
6 impact of localized random events in several ways. First, as I mentioned earlier,
7 performance is evaluated over a multi-year period. Second, the benchmark group
8 contains a large number of utilities. For example, EEI reported that it gathered
9 reliability data on 68 utilities for the 2003 survey. Given the large number, the
10 impact of a localized random event in one of the benchmark companies' service
11 territories is unlikely to affect the performance of the comparison group.

12

13 **ADDITIONAL BENCHMARKING INCLUDED IN TESTIMONY OF OTHER FPL WITNESSES**

14 **Q. Did you review benchmarking studies conducted by other FPL witnesses?**

15 A. Yes. I reviewed the benchmarking studies presented in the testimonies of Mr.
16 Stall, Mr. Yeager, Ms. Williams, Ms. Santos, and Mr. Escoto.

17 **Q. Please discuss your evaluation of Mr. Stall's testimony.**

18 A. In his testimony, Mr. Stall discusses the operating, safety, and financial
19 performance of FPL's nuclear units. He benchmarks several operational and
20 safety measures against the performance of other U.S. nuclear plants, as compiled
21 by INPO and NERC.

22

1 Mr. Stall has relied on publicly available data from trusted sources, including
2 INPO and NERC, to construct his benchmark groups. In my opinion Mr. Stall's
3 analysis and the conclusions he draws are reasonable and reliable.

4 **Q. Please discuss your evaluation of Mr. Yeager's testimony.**

5 A. Mr. Yeager testifies on several topics, including the operating and safety
6 performance of FPL's fossil-fuel units. In evaluating the operating performance
7 of FPL's fossil units, he reports the results of the fossil EAF and EFOR
8 benchmarking study I discussed previously in my testimony. Mr. Yeager also
9 compares FPL's aggregate fossil heat rate against a benchmark group, compiled
10 by Platts. To evaluate the safety performance of FPL's fossil plants, Mr. Yeager
11 compares the OSHA recordable injury rate for the Company's fossil operations to
12 an industry average for other utilities' fossil operations that is compiled by EEI.
13 Based on the results of his benchmarking, Mr. Yeager concludes that since 1998
14 the operating and safety performance of FPL's fossil plants consistently has
15 exceeded industry averages.

16

17 Mr. Yeager has relied on publicly available data from trusted sources, including
18 NERC, EEI, and Platts, to construct his benchmark group. In my opinion Mr.
19 Yeager's analysis and the conclusions he draws are reasonable and reliable.

20 **Q. Please discuss your evaluation of Ms. Williams' testimony.**

21 A. Ms. Williams' testimony addresses the performance of FPL's distribution system,
22 workplace safety, and customer service. In her evaluation of FPL's distribution
23 system reliability, Ms. Williams compares the Company's SAIDI against the EEI

1 benchmark group that I discussed earlier in my testimony. She also reviews the
2 historic performance of other distribution reliability measures. Ms. Williams
3 concludes that FPL's SAIDI is better than the peer group average and distribution
4 reliability has improved over the past several years.

5
6 In my opinion, Ms. Williams' benchmarking and the conclusions she draws are
7 reasonable and reliable.

8 **Q. Please discuss your evaluation of Ms. Santos' testimony.**

9 A. Ms. Santos' testimony covers FPL's customer service business unit. She reports
10 that FPL's call center and customer care center have been recognized for
11 operational excellence in independent, third-party studies conducted by a
12 university research group and a consultancy. In her testimony, Ms. Santos also
13 describes the results of the 2004 PA Consulting benchmarking study, which was
14 based on 2003 year ending data and consisted of 35 electric and gas utilities. For
15 four of the metrics cited in the testimony – average speed of answer, call
16 abandonment rate, cost per call, and write-off rate – FPL performed much better
17 than the group average.

18
19 Ms. Santos has reported the results of an independent, third-party benchmarking
20 study of FPL's customer service performance. I have reviewed the PA
21 Consulting study and consider it reasonable and reliable. In my opinion Ms.
22 Santos' analysis and the conclusions she draws are reasonable and reliable.

1 **Q. Please discuss your evaluation of Mr. Escoto's testimony.**

2 A. Mr. Escoto's testimony covers the Company's compensation and benefits
3 expenses. In his testimony, Mr. Escoto compares the growth of FPL's total
4 compensation in recent years, including payroll and benefits, to the Consumer
5 Price Index (CPI) and World at Work market index. In addition, Mr. Escoto
6 compares several measures of FPL's compensation, including total salary &
7 wages, cash compensation, and total benefits to benchmark groups of other
8 utilities. Mr. Escoto finds that the growth rate of FPL's total compensation was
9 lower than that of the two indices and that various measures of the Company's
10 compensation compare very favorably to other comparable utilities.

11

12 Mr. Escoto has compared FPL's compensation expenses to several publicly
13 available data sources, including data published by the U.S. government. In my
14 opinion Mr. Escoto's analysis and the conclusions he draws are reasonable and
15 reliable.

16

17 SUMMARY

18 **Q. Please summarize your testimony.**

19 A. I have conducted an independent review of the Company's benchmarking studies.
20 I find FPL's benchmarking approach to be reasonable and the conclusions drawn
21 from the results reliable. Across many measures of operational performance, the
22 Company's benchmarking demonstrates that it has achieved high levels of
23 performance and has made important improvements in service levels over the past

1 several years. FPL's benchmarking of financial performance indicates that the
2 Company has been able to reduce or control costs at the same time that it has
3 improved service quality. The Company's non-fuel O&M expense history of
4 controlling and reducing operating expenses has persisted for a period of more
5 than 13 years.

6
7 I also have reviewed the additional benchmarking and comparative studies
8 conducted by other Company witnesses, including their conclusions. The studies
9 I have reviewed are reasonable as are the conclusions drawn by the witnesses.

10 **Q. Does this conclude your direct testimony?**

11 **A. Yes.**

1 **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

2 **FLORIDA POWER & LIGHT COMPANY**

3 **DIRECT TESTIMONY OF J.A. STALL**

4 **DOCKET NO. 050045-EI**

5 **MARCH 22, 2005**

6
7 **Q. Please state your name and business address.**

8 A. My name is J.A. (Art) Stall. My business address is Florida Power & Light
9 Company, 700 Universe Boulevard, Juno Beach, Florida, 33408-0420.

10 **Q. By whom are you employed and what is your position?**

11 A. I am employed by Florida Power & Light Company (FPL or the Company) as
12 Senior Vice President - Nuclear Operations, and Chief Nuclear Officer.

13 **Q. Please describe your duties and responsibilities in that position.**

14 A. I am responsible for the safe and reliable operation of all of FPL's nuclear assets,
15 consisting of four nuclear units in Florida – two at Turkey Point Nuclear Plant
16 near Florida City, Florida, (1,386 MW) and two at St. Lucie Nuclear Plant, near
17 Jensen Beach, Florida (1,677 MW).

18 **Q. Please describe your educational background and the business experience
19 that qualifies you to be FPL's Chief Nuclear Officer.**

20 A. I earned my Bachelor of Science degree in nuclear engineering from the
21 University of Florida in 1977. I also earned a Master's degree in Business
22 Administration from Virginia Commonwealth University in 1983. I am a career
23 nuclear professional with more than 25 years of nuclear operating experience. I

1 joined Virginia Power Company in 1977, where I held various positions of
2 increasing responsibility, including superintendent of operations, assistant station
3 manager for safety and licensing, and superintendent of technical services. I also
4 held a senior nuclear reactor operator license from the U.S. Nuclear Regulatory
5 Commission (NRC) while working at Virginia Power Company's nuclear plants.
6 In 1996, I joined FPL as the Site Vice President at the St. Lucie Nuclear Plant.
7 From 2000 to 2001 I was Vice President for Nuclear Engineering at FPL. I have
8 been Senior Vice President, Nuclear Operations, and Chief Nuclear Officer at
9 FPL since June 2001.

10 **Q. Are you sponsoring an exhibit in this case?**

11 **A.** Yes. It consists of the following documents:

12 JAS-1 – FPL Nuclear Division Personnel Safety.

13 JAS-2 – WANO Indices for FPL's Plants and for Similarly Situated PWRs.

14 JAS-3 – Unit Capability Factor for St. Lucie and Turkey Point.

15 JAS-4 - Forced Loss Rate for St. Lucie and Turkey Point.

16 JAS-5 - Collective Radiation Exposure for St. Lucie and Turkey Point.

17 JAS-6 - NRC Performance Indicators for St. Lucie and Turkey Point.

18 JAS-7 - Capacity Factors for Nuclear Industry.

19 JAS-8 - Steam Generator Tube Plugging for St. Lucie Unit 2.

20 JAS-9 – Life Cycle Management Plans for St. Lucie and Turkey Point.

21 JAS-10 – Historical Capital Expenditures for St. Lucie and Turkey Point.

22 JAS-11 – Historical O&M Spending for St. Lucie and Turkey Point.

23 JAS-12 – Historical Condition Reports for St. Lucie and Turkey Point.

1 **Q. Are you sponsoring or co-sponsoring any MFRs in this case?**

2 A. Yes, I am sponsoring the following MFR:

3 F-4, NRC Safety Citations.

4 Additionally, I am co-sponsoring the following MFRs:

5 B-12, Production Plant Additions

6 B-13, Construction Work in Progress

7 B-16, Nuclear Fuel Balances

8 B-24, Leasing Arrangements

9 C-8, Detail of Changes in Expenses

10 C-15, Industry Association Dues

11 C-16, Outside Professional Services

12 C-41, O&M Benchmark Variance By Function

13 **Q. What is the purpose of your testimony in this proceeding?**

14 A. The purpose of my testimony is to (1) describe how FPL's nuclear fleet
15 performance has yielded significant benefits to FPL customers; (2) describe the
16 challenges to FPL's nuclear operations; (3) describe the steps FPL is taking to
17 address these challenges; and (4) discuss the resulting impact on 2006 test year
18 costs for FPL's nuclear operations.

19

20 **BACKGROUND ON FPL'S NUCLEAR DIVISION**

21 **Q. Please describe FPL's nuclear plants.**

22 A. FPL's long and successful involvement with nuclear power started in the mid-
23 1960s with the first order for nuclear generation in the South. FPL's plans to

1 build nuclear units at the Turkey Point Plant were announced in 1965, and the
2 first nuclear unit achieved commercial operation in 1972. FPL is currently
3 licensed by the NRC to operate the St. Lucie Nuclear Plant, Units 1 and 2, and the
4 Turkey Point Nuclear Plant, Units 3 and 4. Turkey Point Units 3 and 4 are
5 pressurized water reactors designed by Westinghouse. Unit 3 commenced
6 commercial operation in 1972, and Unit 4 did so in 1973. St. Lucie Units 1 and 2
7 are pressurized water reactors designed by Combustion Engineering (now owned
8 by Westinghouse). Unit 1 went into commercial operation in 1976, and Unit 2
9 did so in 1983.

10 **Q. Describe the ownership structure for FPL's nuclear units.**

11 A. FPL owns 100 percent of Turkey Point Units 3 and 4 and St. Lucie Unit 1. FPL
12 owns 85.10449 percent of St. Lucie Unit 2. The balance of St. Lucie Unit 2 is
13 owned by the Florida Municipal Power Agency, which owns 8.806 percent, and
14 the Orlando Utilities Commission, which owns 6.08951 percent.

15 **Q. How long are FPL's nuclear units currently licensed to operate?**

16 A. In June 2002, FPL received renewed operating licenses from the NRC for Turkey
17 Point Units 3 and 4, and in October 2003, FPL received renewed operating
18 licenses from the NRC for St. Lucie Units 1 and 2. The renewed licenses give
19 FPL the authority to operate each unit for twenty years past the original license
20 expiration date should FPL choose to do so. Accordingly, the current license
21 expiration dates are for Turkey Point Unit 3, 2032; for Turkey Point Unit 4, 2033;
22 for St. Lucie Unit 1, 2036; and for St. Lucie Unit 2, 2043.

1 **Q. Has FPL decided yet whether to operate its nuclear plants for the full period**
2 **of extended operation as authorized by the renewed NRC operating licenses?**

3 A. No. FPL will periodically review the prudence of the continued operation of
4 these plants, in light of changing regulatory requirements and the overall
5 economics of continued operation. I should add, however, that I fully expect FPL
6 to operate Turkey Point and St. Lucie well into their renewed license periods.

7 **Q. Is FPL considering new nuclear capacity?**

8 A. FPL is looking toward the future in preserving the nuclear option. Recently, FPL
9 joined the NuStart Energy consortium. NuStart Energy's proposal seeks federal
10 government cost sharing under the U.S. Department of Energy's (DOE) Nuclear
11 Power 2010 initiative to demonstrate the NRC's licensing process for building and
12 operating advanced nuclear power plants. Nuclear Power 2010 is designed to have
13 a new nuclear power plant under construction somewhere in the United States by
14 2010. The DOE program offers to share up to 50 percent of the cost of preparing
15 an application for a construction and operating license (COL) to the NRC. While
16 none of the consortium members, including FPL, has committed to build a new
17 nuclear plant, NuStart Energy does plan to complete detailed engineering design
18 work and to prepare COL applications for two advanced reactors, choose one of
19 the applications and file it for NRC review and approval. After NRC approval,
20 any individual company or group of companies could decide to use the license to
21 build a new nuclear plant based on its assessment of power demand, the price of
22 competing electricity technologies, environmental requirements, and other factors.
23 Of the ten companies participating in the consortium, nine have formed NuStart

1 Energy Development LLC and each has pledged \$1 million a year plus in-kind
2 services for seven years. A federal power agency, the Tennessee Valley
3 Authority, will be providing in-kind services only, and two reactor vendors, GE
4 Energy and Westinghouse, will be contractors to NuStart Energy. FPL views this
5 membership as a prudent measure to help preserve the option of nuclear energy as
6 a potential source of fuel diversity.

7 **Q. Please describe the organization of FPL's Nuclear Division.**

8 A. FPL's Nuclear Division currently employs more than 2200 "full time equivalent
9 employees." The management team at each site reports to a Site Vice President,
10 and each Site Vice President reports directly to me. The engineering organization
11 at each site, which is independent of the line organization at each plant, reports to
12 a site Engineering Manager. In addition, there is an engineering organization in
13 Juno Beach. The Engineering Managers at each location report to the Vice
14 President of Nuclear Engineering, who reports directly to me. The Vice President,
15 Nuclear Operations Support, responsible for integrating and standardizing
16 programs and processes for the nuclear units, and the Vice President Nuclear
17 Projects, responsible for all activities associated with major projects, both report
18 directly to me. The independent quality assurance organization at each site reports
19 to a site Quality Assurance Manager. In addition, there is a quality assurance
20 organization in Juno Beach. The managers of these organizations report to the
21 Director, Nuclear Assurance, who reports directly to me.

NUCLEAR PLANT PERFORMANCE

1
2 **Q. What metrics are used by FPL to measure the performance of FPL's nuclear**
3 **plants?**

4 A. FPL uses the following metrics to measure the performance of our nuclear plants:
5 personnel safety, nuclear safety, reliability, regulatory performance as measured
6 by the NRC, and overall plant performance as measured by an objective
7 numerical index.

8 **Q. Please describe FPL's Nuclear Division personnel safety performance.**

9 A. FPL is proud of its personnel safety record. FPL measures its personnel safety
10 performance using a standard from the Occupational Safety and Health
11 Administration (OSHA) of the U.S. Department of Labor known as an OSHA
12 recordable (serious) injury. Document JAS-1 shows FPL's substantial
13 improvement in the area of personnel safety over the last 10 years. In 1994, FPL
14 had 68 recordable injuries in the Nuclear Division. In contrast, there were less
15 than 10 recordable injuries for each year in the 2001-2004 period. The
16 Southeastern Electric Exchange recently issued a report recognizing FPL's
17 Nuclear Division as best in class among Southeast nuclear generators for 2004
18 safety performance.

19 **Q. Please describe FPL's Nuclear Division nuclear safety and reliability**
20 **performance.**

21 A. FPL is also proud of its nuclear safety and reliability record. FPL's performance
22 in operating its nuclear units has ranked among the best in the United States, as
23 measured by a number of objective performance criteria. As illustrated in

Document JAS-3, the unit capability factor of FPL's nuclear plants has consistently been higher than the industry average from 1998 through 2004. Document JAS-4 shows that the forced loss rate of FPL's nuclear plants has been consistently lower than the industry average from 1998 through 2004. Document JAS-5 illustrates that the collective radiation exposure for FPL's nuclear workforce has been lower than the industry average from 1998 through 2004. Document JAS-6 shows that all of the NRC performance indicators are in the "green" band, indicating acceptable performance. Since the NRC performance indicator program was introduced in the fourth quarter of 2000, with one exception for one quarter, all of the performance indicators for FPL's nuclear plants have been in the "green" band.

Q. Has FPL recently experienced challenges to its nuclear plant performance?

A. Yes. Certain pressurized water reactors, including FPL's nuclear plants, have recently experienced challenges that negatively impacted the World Association of Nuclear Operators (WANO) index in the 2003-2004 period. The WANO index is an internationally recognized metric of nuclear plant safety and reliability. The WANO index is calculated by summing weighted values of the following key indicators:

1. Unit Capability Factor (16%)
2. Forced Loss Rate (16%)
3. Unavailability of High Pressure Safety Injection System (10%)
4. Unavailability of Auxiliary Feedwater System (10%)
5. Unavailability of Emergency AC Power System (Site Average) (10%)

1 6. Unplanned Automatic Reactor Trips (10%)

2 7. Collective Radiation Exposure (10%)

3 8. Nuclear Fuel Reliability (11%)

4 9. Quality of Secondary Water Chemistry (7%)

5
6 Input on these indicators is provided by all nuclear plants on a quarterly basis. As
7 shown in Document JAS-2, several U.S. pressurized water reactors have faced
8 operational challenges similar to those faced by FPL's plants, and the WANO
9 indices for those plants have been affected in a manner similar to the impact on
10 the WANO indices for FPL's nuclear plants. These plants have all experienced
11 problems with or replacements of reactor vessel heads and steam generators. The
12 data shows that the performance of similarly situated plants declined in the
13 timeframe when such problems were encountered or when the replacement
14 projects were executed. The operational challenges facing owners of pressurized
15 water reactors -- issues relating to reactor vessel head penetrations and steam
16 generator degradation -- are discussed further below.

17 **Q. Please discuss the issues that have affected the performance of pressurized**
18 **water reactors.**

19 **A.** A number of factors contributed to the decline in the performance of several
20 pressurized water reactors in late 2003 and early 2004. These include:

- 21 • The discovery of degradation in reactor vessel head penetrations at
22 multiple plants, most notably the findings at the Davis-Besse nuclear plant
23 in 2002;

- 1 • Continuing deterioration in alloy 600 steam generator tubes at a number of
- 2 pressurized water reactor plants, including a tube rupture at the Indian
- 3 Point plant;
- 4 • Pressurizer heater weld degradation at a number of plants, and
- 5 • Equipment aging and obsolescence.

6

7 In general, the most notable events affecting the nuclear industry were those at

8 Davis-Besse and Indian Point. These events have resulted in significant

9 regulatory impacts affecting the entire nuclear industry.

10 **Q. Please describe in more detail the event that occurred at the Davis-Besse**

11 **nuclear plant.**

12 **A.** In March 2002, First Energy, the owner of the Davis-Besse nuclear plant in Ohio,

13 discovered significant degradation in the reactor vessel head after several

14 opportunities to previously identify and correct this degradation were missed. Left

15 unchecked, this degradation could have led to a significant nuclear event (i.e., loss

16 of coolant accident) at this plant. The impacts of this discovery were reflected in

17 two forms.

18

19 First, significantly more rigorous inspections of reactor vessel heads have since

20 been required by the NRC. These inspections have extended the length of planned

21 outages for both inspections and repair (and in some cases reactor vessel head

22 replacements). The extended outages and new reactor vessel head inspections

23 also resulted in elevated occupational radiation exposure to plant workers.

1 Second, specific initiatives related to assessing and improving the safety culture
2 became necessary. Stakeholders also criticized the NRC, based on a perception
3 that NRC allowed Davis-Besse to operate amid concerns about the integrity of the
4 reactor vessel head after First Energy advised the NRC of the economic
5 consequences of a premature plant outage.

6 **Q. Please describe the event that occurred at the Indian Point Nuclear Plant.**

7 A. All steam generator tubes fabricated with alloy 600 mill-annealed tube materials
8 are susceptible to cracking, primarily due to stress corrosion cracking (SCC) on
9 the outer diameter of the tube. When inspections for these generators are
10 performed during each refueling outage, tubes found to have corrosion cracking
11 are taken out of service by plugging.

12
13 An event that has drawn significant scrutiny from the NRC and stakeholders was
14 the steam generator tube leak at the Indian Point Nuclear Plant near New York
15 City in 2001. In that case, a previous steam generator tube inspection failed to
16 identify a degraded steam generator tube, which then ruptured while the plant was
17 in service, resulting in a small release of radioactivity to the environment and
18 entry into the plant's emergency plan. Stakeholders focused blame on the event at
19 the plant's previous owner, Consolidated Edison of New York, and at the NRC, as
20 allegations surfaced that the degradation in the steam generator tube that ruptured
21 should have been identified earlier. Because of the added scrutiny and criticism
22 the NRC received as a result of the Indian Point and Davis-Besse events, the NRC

1 has become more rigid in its approach in the oversight of licensed nuclear
2 operating units.

3 **Q. Please describe the issues related to pressurizer heater weld degradation.**

4 A. Operators of pressurized water reactors have experienced age-related degradation
5 of alloy 600 materials within the nuclear steam supply system (NSSS). As I
6 mentioned previously, the principal degradation mechanism for alloy 600 is SCC.
7 SCC has resulted in cracking in pressurizer penetrations, reactor head penetrations
8 and numerous other locations, resulting in increased inspection costs, repairs, and
9 component replacements. Seven pressurizers at Combustion Engineering plants
10 have developed leaks in over 30 heater sleeve penetrations since 1998. St. Lucie
11 Units 1 and 2 are Combustion Engineering plants and have experienced these
12 same pressurized heater sleeve degradation issues.

13 **Q. Please describe the impacts that equipment aging and obsolescence are**
14 **having on the nuclear industry as a whole.**

15 A. Equipment aging and obsolescence are having an increasing impact on plant
16 reliability and initiatives to sustain high reliability. As the plants in the industry
17 have aged, it has become apparent that preventive and predictive maintenance
18 practices have not fully kept pace with time related equipment degradation. As a
19 result, the frequency of time/age-related failures increased, with adverse
20 consequences to reliability. Specific industry-wide examples (which have also
21 impacted FPL plants) include air operated valve components and electrical power
22 supplies for critical components. Many of the age-related degradation
23 mechanisms were not fully anticipated.

1 In response to the problem of age-related equipment degradation, FPL has
2 undertaken significant upgrades to its predictive and preventive maintenance
3 programs. However, some of these efforts are complicated because spare parts
4 and service expertise for equipment no longer in production or common use are
5 becoming increasingly difficult and expensive to obtain. This has resulted in the
6 need to upgrade systems and equipment with new designs just to preserve or
7 restore traditional plant reliability. Upgrade efforts of this type are resource
8 intensive from a financial and human perspective and have created regulatory
9 challenges in licensing new designs and technologies.

10
11 Collectively, these factors have imposed a significant burden on utilities both
12 from financial and management focus perspectives. Resources focused on
13 continuous improvement were and continue to be redirected toward addressing
14 these issues. FPL recognized the need to take actions to ensure that on-site
15 management was not distracted from its necessary focus on nuclear safety,
16 reliability and continuous improvement. To this end, FPL has formed a Nuclear
17 Operations Support department and a Nuclear Projects department to
18 simultaneously support continuous improvement through standardization to
19 industry best practices while addressing the technical and equipment changes
20 necessitated by the aforementioned industry issues.

1 **Q. Please discuss the impact of these issues on the performance of FPL's nuclear**
2 **units.**

3 A. Document JAS-3 shows FPL's performance for Unit Capability Factor (UCF).
4 The last two years have seen a modest decline in performance. This decline is
5 directly related to the issues discussed above. Specifically, outage extensions
6 were needed to include expanded inspection requirements for primary reactor
7 coolant system components. Additionally, plant aging resulted in an increase in
8 the amount of unplanned work and modification necessary to be performed during
9 our refueling outages in order to safely and reliably operate through the next
10 operating cycle.

11
12 Document JAS-4 shows a decline in performance for Forced Loss Rate (FLR).
13 This decline is attributable in large measure to equipment reliability issues.
14 Consequently, FPL has placed increasing emphasis on its equipment reliability
15 program. FPL experienced an increase in equipment failures during 2002 and
16 2003 (e.g., reactor shutdown due to loss of main generator excitation, automatic
17 and manual reactor trips due to malfunctioning feedwater controls) causing either
18 power reductions or forced outages. These trends indicate that improvements are
19 necessary to ensure that FPL continues to achieve consistent and reliable
20 operation.

21
22 Document JAS-5 shows FPL performance for Collective Radiation Exposure.
23 This indicator has also seen a decline. Even though this measure is not directly

1 related to capacity factor, the major equipment replacements and expanded
2 inspection requirements for primary reactor coolant system components have
3 caused a higher level of occupational radiation exposure to our workforce. FPL
4 strives to minimize the occupational radiation exposure to our workforce. Even in
5 light of the higher exposures caused by the equipment replacements and
6 inspections, at no time has any occupational radiation exposure exceeded the
7 regulatory dose limits imposed by the NRC.

8
9 Other pressurized water reactors that have experienced problems with reactor
10 vessel head and steam generators have experienced similar performance
11 downturns. Document JAS-2 shows that FPL's WANO indices compare
12 similarly with the WANO indices for other pressurized water reactors that have
13 had reactor vessel head and steam generator performance issues.

14 In summary, FPL is proud of its nuclear performance, both from a safety and
15 reliability standpoint. However, this performance cannot be sustained without
16 continued investment in our nuclear plants and our people.

17 **Q. How does the NRC rate FPL's nuclear safety record?**

18 A. The nuclear safety aspects of FPL's nuclear operations are comprehensively
19 regulated by the NRC. The NRC maintains and tracks a set of performance
20 indicators as objective measures of nuclear safety performance. These indicators
21 monitor performance in initiating events, performance of safety systems,
22 maintenance of fission product barrier integrity, emergency preparedness,
23 occupational and public radiation safety, and physical protection. As shown in

1 Document JAS-6, all four of FPL's units are in the "green" band of all NRC
2 Performance Indicators, indicating good nuclear safety performance.

3 **Q. How do FPL's nuclear plants compare to the remainder of the industry in**
4 **terms of the NRC performance system?**

5 A. Based on the NRC's Performance Indicators, the NRC determines the appropriate
6 level of agency response, including the need for supplemental inspections,
7 regulatory actions, and senior management meetings. Nuclear plants in the
8 "green" band receive only baseline NRC inspections. From the NRC's
9 perspective, FPL's plants compare favorably with the remainder of the industry.
10 Approximately 25 percent of the nuclear plants in the United States are
11 characterized by the NRC as having some level of degraded plant performance
12 requiring increased NRC regulatory involvement for those plants: the "regulatory
13 response" category (17 plants having at least one regulatory finding of low to
14 moderate safety significance in the past 12 months); the "degraded cornerstone"
15 category (zero plants), and the "multiple/repetitive degraded cornerstone"
16 category (3 plants having a regulatory finding of low to moderate safety
17 significance, a regulatory finding of substantial safety significance, or a finding of
18 high safety significance, usually coupled with inadequate corrective actions).
19 None of FPL's units falls into these categories. The NRC conducts additional
20 inspections of plants with performance indicators showing degraded performance
21 (white, yellow, or red). This regulatory structure places a premium on FPL's
22 ability to identify and correct problems on our own. Degraded performance can
23 result in increased NRC regulatory activity, which in turn would require

1 management attention to these NRC inspections and increase O&M costs
2 accordingly.

3 **Q. Please describe FPL's nuclear generation performance and compare this**
4 **performance to the rest of the nuclear industry.**

5 A. As shown in Document JAS-7, FPL has maintained capacity factors (including
6 refueling outages) for FPL's Nuclear Division equal to or greater than the industry
7 average. This was achieved while at all times maintaining the highest levels of
8 safety performance. As discussed above, some declines were experienced by FPL
9 in the 2003-2004 period. For FPL, the declines were principally attributable to
10 equipment problems resulting either in extensions to planned outages or
11 unplanned generation loss.

12 **Q. How do FPL's planned refueling outages compare to other planned refueling**
13 **outages in the industry?**

14 A. FPL's refueling outages are well planned and structured to assure a proper balance
15 is maintained between safety and reliability and overall outage duration.
16 Refueling and maintenance activities have been typically performed in less than
17 30 days, which is better than the industry average. In fact, some of our outages
18 have been the shortest achieved for similar units in the industry. For example, in
19 2001 the employees at Turkey Point completed a refueling outage in 15 days. Our
20 employees continuously critique outage performance, and lessons learned are
21 implemented in subsequent outages to further improve performance. Similarly,
22 benchmarking is performed at other nuclear stations to identify improvement
23 opportunities.

1 **Q. Are there other challenges facing FPL's nuclear fleet relating to human**
2 **resources?**

3 A. Yes. A substantial percentage of the nuclear workforce is approaching retirement
4 age, creating challenges for maintenance of needed expertise and creating
5 demands for staffing adjustments and training of new workers. In particular,
6 certain highly skilled classes within the Nuclear Division will have approximately
7 600 employees eligible to retire within the next five to seven years. The entire
8 nuclear industry faces this issue. As a result, FPL cannot count on hiring from
9 other nuclear entities to compensate for the workforce attrition issue. FPL will be
10 required to add headcount to anticipate and ultimately compensate for attrition
11 and retirements. Additional headcount will also be required to ensure compliance
12 with an upcoming NRC rulemaking that will impose additional restrictions on the
13 number of hours that can be worked by nuclear plant personnel.

14 **Q. Did the events of September 11, 2001 have an impact on FPL's nuclear**
15 **programs?**

16 A. Yes. In light of the events of September 11, 2001, FPL has substantially
17 enhanced nuclear security measures to address additional requirements imposed
18 by the NRC. Since September 11, 2001, the NRC has issued a series of legally
19 binding Security Orders that: (1) provided interim guidance for security measures
20 necessary to comply with new requirements; (2) revised the "design basis threat"
21 for nuclear power plants; (3) defined fatigue limits for nuclear plant security
22 officers; (4) revised the access authorization requirements for nuclear plant

1 personnel; and (5) prescribed training and qualification requirements for security
2 officers.

3
4 For 2006, FPL projects that it will spend \$10.2 million to comply with the NRC's
5 existing Security Orders. If there are no further changes to the NRC's security
6 requirements, this amount should be representative of FPL's annual September
7 11, 2001-related nuclear security costs in 2007 and beyond. However, the NRC is
8 engaged in a continued, ongoing process of reevaluating its Security Orders. This
9 reevaluation resulted in the issuance of three additional Security Orders in 2003,
10 which are requiring FPL to spend in excess of \$40 million in 2004-2005 beyond
11 the baseline annual security costs for those years. FPL has no assurances that
12 there will not be further changes to the NRC's security requirements, compliance
13 with which could lead to additional extraordinary expenditures in future years. In
14 fact, the nuclear industry has been advised by the NRC that the agency plans to
15 impose additional security requirements on all nuclear plants at some point in
16 2005.

17
18 Beyond the direct costs of complying with the NRC's security requirements, there
19 are also unquantifiable but substantial indirect impacts on productivity due to the
20 diversion of plant staff toward meeting these emerging security requirements.

1 **Q. How is the United States Department of Energy's failure to carry out its legal**
2 **obligation to dispose of FPL's spent nuclear fuel affecting FPL?**

3 A. FPL has previously provided the Commission with details of its attempts through
4 litigation to seek recovery of past and future damages related to the U.S.
5 Department of Energy's default in disposing of spent nuclear fuel. There will be
6 significant capital and O&M expenses relating to the long-term spent fuel storage
7 problem. The path to recovery of those expenses through litigation has been and
8 will continue to be slow and uncertain.

9 **Q. What impact could all of these challenges have on FPL?**

10 A. Failure to maintain the condition of safety-related equipment at FPL's nuclear
11 plants could have substantial economic, safety, reliability, and regulatory
12 consequences for FPL, as illustrated by events at other nuclear plants. The
13 discovery of the reactor head degradation at Davis-Besse caused that plant to be
14 shut down for more than two years for regulatory reasons, with resulting impacts
15 of more than \$673 million to that company. In this context, the NRC received
16 significant criticism from stakeholders, including Members of Congress, for not
17 taking a stronger position on ongoing equipment problems at Davis-Besse and for
18 a perception that the NRC allowed Davis-Besse to continue operating for
19 economic reasons. There is now a significant premium on critical self-
20 identification and problem resolution. This has numerous implications for FPL
21 and other nuclear plant operators, including a reduced margin for allowable steam
22 generator tube degradation, stricter reactor vessel closure head inspection and
23 acceptance requirements, and a reduced management and regulatory tolerance for

1 equipment degradation issues in general. This reduced tolerance for equipment
2 problems has and will continue to result in longer and more expensive outages at
3 FPL and throughout the industry.

4 **Q. Does the age of FPL's nuclear plants exacerbate these challenges?**

5 A. Yes. Turkey Point Units 3 and 4 have each been in service for more than 30 years,
6 St. Lucie Unit 1 has been in service for 28 years, and St. Lucie Unit 2 has been in
7 service for 20 years. As noted above, equipment aging is resulting in an increase
8 in the amount of work necessary to operate safely and reliably, and has resulted in
9 unplanned generation loss. In addition, the NRC regulatory environment since
10 the Davis-Besse event strongly discourages operation with degraded equipment
11 even if that degradation does not cause a direct threat to safety or reliability.
12 Accordingly, FPL must invest in its nuclear program in order to preserve the
13 viability of FPL's nuclear plants into the renewed license terms.

14
15 **RESPONSES TO CHALLENGES TO FPL'S NUCLEAR PROGRAM**

16 **Q. How is FPL reacting to the challenges to its nuclear program?**

17 A. The challenges to FPL's nuclear program are driving proactive and major
18 investments in plant equipment programs, staffing, and training to preserve the
19 nuclear option. As part of a long-range plan, FPL is focusing on the infrastructure
20 necessary to ensure the successful execution of a multi-year capital investment
21 program. The areas of focus are: improvements in plant material condition,
22 address equipment reliability and aging, backlog reduction and staffing. In order
23 to meet these challenges, FPL plans on making significant capital investments in

1 its nuclear plants. FPL is also undertaking several operational programs which
2 will result in significant additional O&M expenses.

3 **Q. What is included in FPL's capital investment effort?**

4 A. The major projects included in the capital investment effort are:

- 5 1. Reactor Vessel Head Replacement for St. Lucie and Turkey Point
- 6 2. St. Lucie Unit 2 Steam Generator Replacement
- 7 3. St. Lucie Unit 1 Pressurizer Replacement
- 8 4. Life Cycle Management and
- 9 5. Spent Fuel Initiatives

10 **Q. Please explain the necessity of replacing the Reactor Vessel Heads.**

11 A. As discussed above, in March 2002, a large cavity in the reactor vessel head at the
12 Davis-Besse nuclear plant was discovered while conducting the required
13 inspections of the reactor head penetration nozzles. As a result of this discovery,
14 the NRC questioned the methodology that was being used by the nuclear industry
15 for determining the susceptibility for potential reactor vessel head penetration
16 leaks and the ability of visual inspection techniques to identify all reactor head
17 damage mechanisms. Consequently, the NRC issued a series of legally binding
18 orders to address its concerns.

19
20 These orders have resulted in all four FPL units being categorized as "highly
21 susceptible" to the problem identified at Davis-Besse. These orders require FPL
22 to perform 100% non-destructive examination, including ultrasonic and dye
23 penetrant testing of the penetrations in addition to visual inspections. The testing

1 must be performed every refueling outage until the reactor heads are replaced.
2 Failure to replace the reactor heads would require FPL to continue to pay for costs
3 associated with reactor head inspections until the reactor heads are replaced. The
4 susceptibility of reactor head to further degradation requiring repair increases with
5 each inspection. The inspection program also requires plant personnel to incur
6 higher than normal occupational radiation dose. The repairs could impact critical
7 path durations during refueling outages and increase the number of days a unit
8 would be off-line.

9
10 For these reasons, FPL placed orders for new reactor vessel heads for Turkey
11 Point and St. Lucie. FPL has entered into contracts for procurement of reactor
12 vessel head components for each of its four units, and a contract for the
13 installation of each reactor vessel head. FPL successfully replaced the reactor
14 vessel head at Turkey Point Unit 3 during an outage in the Fall of 2004, and plans
15 on replacing the existing reactor vessel heads at the remaining three nuclear units
16 beginning in the Spring of 2005.

17 **Q. Please explain the necessity of replacing the St. Lucie Unit 2 Steam**
18 **Generators.**

19 A. As discussed previously, the St. Lucie Unit 2 steam generators were fabricated
20 with alloy 600 tube material. Consistent with experience from other plants
21 including St. Lucie Unit 1, the number of steam generator tubes requiring
22 plugging has significantly increased over the last two inspections, as illustrated in
23 Document JAS-8. The number of steam generator tubes that can be plugged is

1 limited by regulatory requirements and plant operational parameters. Most steam
2 generators in the industry that were manufactured with the alloy 600 mill
3 annealed tube material have been replaced, including those at St. Lucie Unit 1. In
4 1997-1998, FPL replaced the steam generators at St. Lucie Unit 1 in record time
5 and well within budget, reducing the potential for tube leaks that could lead to
6 extended shutdowns.

7
8 In January 2005, FPL received permission from the NRC to plug up to thirty
9 percent (30%) of the tubes in the St. Lucie Unit 2 steam generators. To date,
10 18.9% of these tubes have been plugged. It is possible that during the next
11 scheduled refueling outage of St. Lucie Unit 2 in spring of 2006 the 30% tube
12 plugging limit could be exceeded. FPL is currently evaluating various interim
13 options, including sleeving degraded tubes, to stay within the tube plugging limit.
14 FPL has requested NRC approval to sleeve degraded tubes as an alternative to
15 plugging. Ultimately, sleeving of steam generator tubes is not a permanent
16 solution, and replacement of the steam generators will minimize the potential for
17 mid-cycle outages and extended plant outages, and maintain plant reliability.
18 Accordingly, FPL has entered into a contract for new steam generators for St.
19 Lucie Unit 2, and the new steam generators will be installed in 2007.

20 **Q. Please explain the necessity of replacing the St. Lucie Unit 1 Pressurizer.**

21 A. In 2003, circumferential cracking was observed in alloy 600 pressurizer heater
22 sleeves. Industry experience indicates that once detected, such cracking proceeds
23 at an accelerated rate. FPL's analysis of this problem concluded that replacing the

1 pressurizer in Unit 1 was the least cost alternative compared to continuing
2 inspections and remedies. Additionally, FPL receives a benefit by replacing the
3 pressurizer during the 2005 refueling outage. This is a planned extended outage
4 for the reactor head replacement, and replacing the pressurizer during this outage
5 will avoid two extended refueling outages and reduce the number of days the unit
6 is off-line. Accordingly, FPL has entered into a contract for the procurement of a
7 replacement pressurizer and for the installation of that component at St. Lucie
8 Unit 1 in the Fall of 2005.

9 **Q. Please explain FPL's plans for addressing issues with the St. Lucie Unit 2**
10 **pressurizer.**

11 A. The Unit 2 pressurizer has approximately thirty heaters, as opposed to more than
12 one hundred heaters in the Unit 1 pressurizer. This design difference means that
13 repair of the Unit 2 pressurizer heater sleeves is feasible and the least cost
14 alternative in dealing with Unit 2 pressurizer issues.

15 **Q. Please explain the necessity for the Life Cycle Management Upgrades.**

16 A. The Life Cycle Management capital project will replace obsolete instrument and
17 controls (I&C) in several critical plant control systems at the nuclear sites.
18 Document JAS-9 lists the systems that are being replaced. In many cases, dated
19 analog technology will be replaced with digital technology. I&C maintenance
20 costs are increasing as the equipment ages. The existing equipment utilizes
21 obsolete technology that requires maintenance by specially trained personnel.
22 Maintaining specialized personnel increases training costs as the workforce ages
23 and retires. Additionally, many parts are not available and custom refurbishment

1 of existing parts is necessary. New modern control equipment will minimize the
2 potential for extended plant shutdowns, and maintain plant reliability. Inventory
3 and spare part costs will be reduced since vendor availability is increased. Costs
4 associated with maintenance specialization will be reduced.

5 **Q. Please explain the necessity for spent fuel storage initiatives.**

6 A. As discussed above, FPL will incur capital and O&M expenditures to manage the
7 DOE's failure to begin accepting spent fuel for disposal as required by law. On-
8 site storage capacity for spent fuel in the spent fuel pools is limited. As existing
9 capacity is utilized, alternative methods of storing the spent fuel are required.
10 Alternative storage is required as a prudent operational measure whenever the
11 spent fuel pools can no longer accommodate a full-core offload. Maintaining a
12 full-core offload capability is a prudent measure in the event that all of an entire
13 core of reactor fuel must be offloaded to accomplish emergent repairs to the
14 reactor.

15
16 The approximate dates for loss of full-core offload capability using installed
17 storage systems are as follows:

18 St. Lucie Unit 1	2008
19 St. Lucie Unit 2	2007
20 Turkey Point Unit 3	2010
21 Turkey Point Unit 4	2012

1 In addition to the loss of storage due to the increasing inventory of spent fuel,
2 storage space could also be lost at St. Lucie Unit 1 and Turkey Point Units 3 and 4
3 due to degradation of the neutron-attenuating material (Boraflex) in the spent fuel
4 storage racks. To date, Boraflex degradation has only affected the loss of full-
5 core offload capability at Turkey Point Unit 3. As discussed below, FPL is
6 investigating alternatives to eliminate reliance on Boraflex.

7 **Q. What are the specific spent fuel initiatives for St. Lucie?**

8 A. Installation of a removable storage rack in the cask pit area of each spent fuel pool
9 will provide increased storage space for both units. In July 2004 the NRC
10 approved the use of St. Lucie cask pit racks. The Unit 1 cask pit rack was
11 installed in September 2004, and will be placed in service in 2005. Installation of
12 the Unit 2 cask pit rack is being deferred in light of the recent decision to pursue
13 dry cask storage for St. Lucie, as discussed below.

14
15 In light of recent NRC licensing challenges related to spent fuel pools, new
16 regulatory issues with spent fuel storage, and FPL's newly revised expectations
17 for the Department of Energy's acceptance of spent nuclear fuel for permanent
18 disposal, FPL decided that proceeding directly to dry cask storage for St. Lucie
19 was a prudent approach. Accordingly, FPL is now pursuing dry cask storage as
20 the primary solution to St. Lucie's incremental spent fuel storage requirements.
21 Dry cask storage consists of a system of concrete and steel storage casks placed
22 on a secure onsite storage pad. Each spent fuel storage cask can contain as many

1 as 32 spent fuel assemblies. Once operational, dry storage would extend the full-
2 core reserve capability of each spent fuel pool indefinitely.

3 **Q. What are the specific spent fuel initiatives for Turkey Point?**

4 A. Installation of a removable storage rack in the cask pit area of each spent fuel pool
5 will provide increased storage space for both units. In November 2004 the NRC
6 approved the use of these racks and the racks have been installed. The cask pit
7 racks extend the loss of full-core reserve dates as follows:

8 Turkey Point Unit 3 2010

9 Turkey Point Unit 4 2012

10

11 These projected dates for the loss of the full-core offload capability dates are
12 based on the existing degraded state of Boraflex and a resulting loss of storage
13 space. To restore and maintain the full storage capacity of these racks, FPL plans
14 to install new neutron-absorbing inserts into the storage racks. NRC approval for
15 this effort is expected in late 2006 or 2007.

16

17 To extend Turkey Point operations for the long term, FPL is planning to
18 implement dry cask storage at the Turkey Point site. A preliminary site selection
19 survey was completed in 2004. Following site selection, FPL will select a cask
20 supplier and start storage pad construction in 2006. The first cask loading is
21 planned to occur in advance of the loss-of-full-core-reserve in 2010.

22

1 **Q. How is FPL's Nuclear Division addressing the challenges posed by attrition**
2 **and by the impending NRC work hour rulemaking?**

3 A. FPL has already created a Nuclear Operations Support department and a Nuclear
4 Projects department to manage the industry issues discussed previously. FPL is
5 also aggressively recruiting additional talent for its Nuclear Division. Further, in
6 2004, FPL's Nuclear Division began a Leadership Forum/Supervisory
7 Development Academy (SDA) to further develop and improve the skill sets of
8 managers and supervisors. Each SDA session includes approximately 25
9 managers and supervisors drawn from the nuclear plant sites and from FPL's
10 corporate headquarters and covers a wide range of topics and exercises focused on
11 developing and improving managerial and supervisory skills for each participant.
12 Each SDA session is a full-time multi-week exercise.

13

14 **FINANCIAL IMPACT OF RESPONDING TO CHALLENGES**

15 **Q. How do the forecasted capital expenditures compare to historical values?**

16 A. Document JAS-10 shows that for the past several years, FPL has been able to
17 minimize the Nuclear Division's capital expenditures. With the challenges going
18 forward, these spending levels must be increased to preserve the nuclear option.
19 The overall impact on capital expenditures is summarized as follows: In 2005,
20 FPL expects that its capital expenditures for the Nuclear Division will be
21 approximately \$301.4 million. In the 2006 test year, FPL expects that its capital
22 expenditures for the Nuclear Division will be approximately \$221.6 million. In
23 2007, FPL expects that its capital expenditures for the Nuclear Division will be

1 approximately \$260.6 million. Of the capital expenditures, more than \$520
2 million will be spent on steam generator and reactor vessel head replacements.

3 **Q. How do the forecasted O&M expenditures compare to historical values?**

4 A. Document JAS-11 shows that for the past several years, FPL has been able to
5 minimize the Nuclear Division's O&M expenditures. FPL's O&M spending is
6 increasing due to the drivers previously identified. FPL anticipates its spending to
7 increase to keep up with workloads resulting from an increase in issued Condition
8 Reports (CRs). A CR identifies an issue of an unexpected or unwanted
9 circumstance pertaining to equipment performance, design requirements, process
10 inefficiencies or shortfalls in human performance. Additional resources will be
11 required to resolve these open issues to maintain plant safety and reliability.
12 Document JAS-12 shows an increase in the number of CRs written from 2003 to
13 2004. With respect to O&M expenditures, the overall impact is summarized as
14 follows: In 2005, FPL expects that its O&M expenditures for the Nuclear
15 Division will be approximately \$311 million. In the 2006 test year, FPL expects
16 that its O&M expenditures for the Nuclear Division will be approximately \$350
17 million. In 2007, FPL expects that its O&M expenditures for the Nuclear Division
18 will be approximately \$387 million.

19
20 **SUMMARY**

21 **Q. Please summarize your testimony.**

22 A. FPL's nuclear power plants are a source of reliable, safe, and cost effective
23 energy for FPL's customers. Those plants are a key component of FPL's energy

1 mix. In order to position FPL's nuclear power plants for continued reliable, safe,
2 and cost effective operation, and to meet the significant operational and regulatory
3 challenges facing those plants, FPL is required to increase its capital and O&M
4 spending to implement equipment upgrades, ensure that degraded plant conditions
5 are addressed in a timely fashion, and maintain a qualified workforce.

6 **Q. Does this conclude your direct testimony?**

7 **A. Yes.**

8

ERRATA SHEET

(X) DIRECT TESTIMONY, OR () REBUTTAL TESTIMONY (PLEASE MARK ONE WITH "X")

WITNESS: J.A. Stall

[illegible]

1 **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

2 **FLORIDA POWER & LIGHT COMPANY**

3 **DIRECT TESTIMONY OF WILLIAM L. YEAGER**

4 **DOCKET NO. 050045-EI**

5 **MARCH 22, 2005**

6
7 **Q. Please state your name and business address.**

8 A. My name is William L. Yeager. My business address is 700 Universe Boulevard,
9 Juno Beach, Florida, 33408-0420.

10 **Q. By whom are you employed and what position do you hold?**

11 A. I am employed by Florida Power & Light Company (FPL or the Company) as
12 Vice President of Engineering and Construction.

13 **Q. Please describe your duties and responsibilities in that position.**

14 A. I am responsible for the overall management and direction of licensing,
15 engineering, procurement, and start-up activities associated with new supply-side
16 non – nuclear generation projects for the Company.

17 **Q. Please describe your educational background and professional experience.**

18 A. I received a Bachelor of Mechanical Engineering from the Georgia Institute of
19 Technology in 1982. In 2002, I received a Masters in Business Administration at
20 the University of South Florida. I am a Registered Professional Engineer in the
21 State of Florida and a member of the American Society of Mechanical Engineers.
22 I began my career as a mechanical engineer with FPL in 1982 at the Port
23 Everglades power station. In subsequent years I led the project engineering effort

1 during FPL's Lauderdale Units 4 & 5 repowering project, and FPL's Martin Units
2 3 & 4 combined cycle capacity additions. Following completion of Martin Units
3 3 & 4, I held various management positions at the FPL Martin Plant site and on
4 FPL's Combustion Turbine Fleet Team, increasing my operational knowledge of
5 combined cycle and conventional oil/gas-fired power plants, which led to my role
6 as Plant General Manager of FPL's Manatee Plant.

7
8 In 2002, I joined the Engineering and Construction Division as Director of
9 Engineering and Procurement and in 2005 I was promoted to Vice President of
10 that Division.

11 **Q. Are you sponsoring an exhibit in this case?**

12 A. Yes. I am sponsoring an exhibit consisting of eight documents, WLY-1 through
13 WLY-8, which are attached to my direct testimony.

14 **Q. Are you sponsoring or co-sponsoring any MFRs filed in this case?**

15 A. Yes. I am sponsoring and co-sponsoring the MFRs listed in Document WLY-1.

16 **Q. Are you sponsoring or co-sponsoring any 2007 Turkey Point Unit 5
17 Adjustment Schedules in this case?**

18 A. Yes. I am co-sponsoring the 2007 Turkey Point Unit 5 Adjustment Schedules
19 listed in Document WLY-1.

20 **Q. What are the purpose and key points of your testimony?**

21 A. My testimony addresses four major areas: 1) the performance of FPL's fossil
22 units; 2) trends in fossil non-fuel operating and maintenance (O&M) expenses and
23 capital expenditures, as well as forecasts for 2006; 3) placing Martin Unit 8 and

1 Manatee Unit 3 into commercial operation in 2005; and 4) placing Turkey Point
2 Unit 5 into commercial operation in 2007.

3
4 The Power Generation Division is responsible for the operation and maintenance
5 of FPL's fossil power plants. The Power Generation Division, through its
6 leadership, management systems, and processes, has helped successfully defer the
7 need for new generating units by improving the performance and availability of
8 FPL's existing fossil fleet. Since 1998, FPL's fossil plant operating performance
9 has consistently exceeded industry averages, frequently ranking "best in class" in
10 the industry.

11
12 For the period 2002 through 2004, FPL was able to hold fossil non-fuel O&M
13 expenses relatively flat. To maintain plant availability and reliability, along with
14 supporting the growth of the generation fleet, fossil non-fuel O&M expenses are
15 forecast to increase in 2005 and 2006 primarily due to new plant additions and
16 plant maintenance. Even with the increase, FPL's 2006 forecasted fossil non-fuel
17 O&M of 0.26 cents/kilowatt-hour (kWh) represents continued outstanding cost
18 performance. Capital expenditures are also forecast to increase in 2005 and 2006.
19 Also, between 1998 and 2006, FPL's fossil fleet will add 26 generators, a 62%
20 increase. The purchase of combustion turbine (CT) wear parts to support FPL's
21 growing fleet is a primary capital cost driver.

1 FPL will be adding new generating capacity to support the growing needs of the
2 customer. From 1986 to 2002 FPL added an average of approximately 235
3 megawatts per year. Customer demand grew at a high rate during this time, but
4 the Company was able to meet incremental load requirements through plant
5 reliability and availability improvements, among other things. FPL will no longer
6 be able to meet incremental load requirements by improving its already
7 outstanding generating unit performance. FPL will have to add nearly 4,000
8 megawatts of low cost generating capacity during the five-year period from 2002
9 through 2007. This represents an average addition of nearly 800 megawatts per
10 year, or more than three times the rate of the prior seventeen years. The Martin
11 Unit 8 and Manatee Unit 3 plant expansion projects have been approved by the
12 Florida Public Service Commission (FPSC) and are forecast for commercial
13 operation by the summer of 2005. A new fossil unit at the Turkey Point site,
14 designated as Unit 5, has also been approved by the Florida Public Service
15 Commission to begin operation on June 1, 2007. Even with the inclusion of these
16 three new units, FPL's forecasted 2007 fossil non-fuel O&M performance of 0.27
17 cents/kWh represents outstanding cost performance.

18 19 FPL'S POWER PLANT PERFORMANCE

20 **Q. What indicators does FPL use to measure the operating performance of its**
21 **fleet of fossil generating units?**

22 **A.** FPL uses a number of indicators to measure the performance of its fossil units.
23 They include Equivalent Availability Factor (EAF) to measure unit availability,

1 Equivalent Forced Outage Rate (EFOR) to measure unit reliability, U.S.
2 Department of Labor Occupational Safety & Health Administration (OSHA)
3 recordables to measure safety performance, net heat rate (Btu/kWh) to measure
4 unit efficiency, and cost (non-fuel O&M cents/kWh) to measure the effectiveness
5 of resource management and utilization.

6 **Q. Please define the indicators used to measure plant availability and reliability.**

7 A. Equivalent Availability Factor (EAF) is a measure of a generating unit's
8 capability to provide electricity throughout the year, regardless of whether the
9 generating unit is actually called upon to provide electricity. Planned, Forced,
10 and Maintenance outages are the main components typically associated with
11 measuring EAF. EAF is reported in terms of the hours in a given period (e.g., a
12 year), that a generating unit is available to deliver electricity, as a percentage of
13 all the hours in the period. FPL strives for, and has achieved, a high EAF.

14
15 Equivalent Forced Outage Rate (EFOR) is a measure of a generating unit's
16 inability to provide electricity when it was scheduled to operate. EFOR is
17 reported in terms of the hours when a generating unit could not deliver electricity
18 as a percentage of all the hours during which that unit was called upon to deliver
19 electricity. FPL strives for, and has achieved, a low EFOR.

20 **Q. Has the EAF of FPL's fossil plants improved over time?**

21 A. Yes. Since 1990, FPL has improved the EAF of its fossil fleet from 81.7% to
22 93.7% in 2004. As shown in Document WLY-2, since 1998 FPL has sustained
23 outstanding performance of above 90% EAF for its fossil plants.

1 **Q. How does the EAF of FPL's fossil plants compare to that of others in the**
2 **industry?**

3 A. FPL has maintained an industry-leading position in EAF since 1998. As shown in
4 Document WLY-2, FPL's fossil plants have performed significantly better than
5 the industry average. From the period 1998 through 2003, the industry EAF
6 averaged 85.1%, while FPL's fossil unit performance averaged 93.3% during the
7 same period. In 2003, the latest industry data available, FPL's fossil EAF was
8 90.1%, compared to the industry average EAF of 84.9%. FPL's fossil EAF
9 performance has been "best in class" for five out of the last six years.

10 **Q. Has the EFOR of FPL's fossil plants also improved over time?**

11 A. Yes. As shown in Document WLY-3, the EFOR of FPL's fossil plants has
12 improved, from 2.4% in 1998 to 1.1% in 2004.

13 **Q. How does the EFOR of FPL's fossil plants compare to that of others in the**
14 **industry?**

15 A. FPL's fossil EFOR performance has significantly exceeded the industry average,
16 as shown in Document WLY-3. From the period 1998 through 2003, FPL's fossil
17 plant EFOR averaged 2.1%, while the industry EFOR averaged 8.2%. FPL's
18 2003 EFOR performance of 3.0% is significantly better than the 2003 industry
19 average EFOR of 8.7%. FPL fossil units ended 2004 with an outstanding EFOR
20 performance of 1.1%. FPL has sustained a "best in class" position in EFOR for
21 four out of the last six years.

1 **Q. What is the source of the data FPL uses to compare its EAF and EFOR**
2 **performance to that of other utilities?**

3 A. FPL obtains annual EAF and EFOR data for other utilities from the North
4 American Electric Reliability Council (NERC). The annual data becomes
5 available approximately one year after the end of each calendar year.

6 **Q. What is the significance of FPL's EAF and EFOR performance to this case?**

7 A. FPL's excellent EAF and EFOR performance have helped defer the need for new
8 capacity additions by increasing the amount of time our existing assets are
9 available to provide generation to FPL's customers. From 1986 to 2002 FPL
10 added an average of approximately 235 megawatts per year. Customer demand
11 grew at a high rate during this time, but the Company was able to meet
12 incremental load requirements through plant reliability and availability
13 improvements, among other things. Also, having high availability means that the
14 most efficient generating units will be available to operate a greater part of the
15 time, thus minimizing the fuel costs incurred to meet customer needs.

16 **Q. Has FPL taken other actions to help avoid or defer the need for new**
17 **generating capacity?**

18 A. Yes. In the early 1990s the Power Generation Division implemented a program
19 known as Perfect Execution of Peak Operations (PEPO). The PEPO program was
20 designed to systematically assess the peak generating capacity of its units within
21 their design capabilities. This program allowed the Power Generation Division to
22 operate its fossil units at peak capacity during high load demand periods. The
23 PEPO program raised FPL's level of confidence in the reliability of these peaking

1 megawatts to the point that they could be included in the rated capacity for our
2 fossil fleet. For 2005, it is expected that this program will have made over 600
3 megawatts available to FPL.

4 **Q. What indicator does FPL use to measure the safety performance of its fossil**
5 **units?**

6 A. FPL primarily looks to the number of OSHA recordables per year to measure
7 safety performance at its fossil units.

8 **Q. Please describe what you mean by "OSHA recordables."**

9 A. OSHA recordables are all work-related deaths and illnesses and those work-
10 related injuries which result in: loss of consciousness, restriction of work or
11 motion, transfer to another job, or require medical treatment beyond first aid, and
12 which must therefore be reported to the Occupational Safety & Health
13 Administration. FPL keeps a record of all such incidents, referred to as "OSHA
14 recordables," as a measure of how safely work is performed at its fossil-fuel
15 plants.

16 **Q. Please show how the annual rate of OSHA recordables at FPL's fossil plants**
17 **has changed over time.**

18 A. As shown in Document WLY-4, FPL's OSHA recordable injury rate for fossil
19 plants has decreased from 1.83 in 1998 to 0.84 in 2004. From 1991, the Power
20 Generation Division has reduced the OSHA recordable injury rate 83%. This
21 remarkable improvement reflects not only the tenacity of FPL's safety effort and
22 the strength of FPL's safety culture, but further demonstrates the broader
23 discipline and effectiveness FPL applies to performance of work at its fossil

1 plants. While this improvement in safety has been a significant achievement, the
2 Power Generation Division's goal remains to have zero injuries.

3 **Q. How does FPL's fossil safety performance compare to other utilities?**

4 A. As shown in Document WLY-4, FPL's fossil plants have performed significantly
5 better than the industry average, which consists of all fossil companies that
6 participated in the survey conducted and published by the Edison Electric Institute
7 (EEI). From the period 1998 through 2003, FPL's fossil plant OSHA recordable
8 injury rate averaged 1.05, while the industry OSHA recordable injury rate
9 averaged 3.93. Our 2003 performance of a 0.49 OSHA Recordable Injury Rate
10 was significantly better than the industry average of 4.15.

11 **Q. What indicator does FPL use to measure the efficiency of its fossil units?**

12 A. One indicator of efficiency is net heat rate, which is calculated by dividing the
13 total Btu of fuel consumed each year in FPL's fossil units, by the kWh of
14 electricity produced from those units.

15 **Q. Please show how the efficiency of FPL's fleet of fossil generating units has
16 changed over time.**

17 A. The trend in efficiency of FPL's fossil generating units is provided in Document
18 WLY-5. In 1998, the net heat rate for FPL's fossil fleet was 9,456 Btu/kWh. By
19 2004, FPL's fossil fleet net heat rate improved to 8,732 Btu/kWh, which
20 represents an efficiency gain of 8%. Since 1990, FPL has improved the net heat
21 rate of its fossil fleet from 10,214 Btu/kWh to 8,732 Btu/kWh, a 15%
22 improvement in efficiency.

1 **Q. How does FPL's fossil plant net heat rate performance compare to other**
2 **utilities?**

3 A. FPL's net heat rate compares favorably to the industry average for all electric
4 utilities. As shown in Document WLY-5, FPL's average net heat rate improved
5 8% between 1998 and 2004, while the industry average has remained relatively
6 flat at above 10,000 Btu/kWh.

7 **Q. Can you provide an example of how an improved net heat rate benefits the**
8 **customer?**

9 A. Yes. For example, if fossil system fuel costs equal \$100 million per year, and
10 assuming nothing else changes, net heat rate improves 8%, this means that the
11 system now requires 8% less fuel to produce the same amount of kilowatt hours.
12 This translates to \$8 million in fuel savings per year to the customer.

13 **Q. Please summarize your position on the performance of FPL's fossil**
14 **generating system.**

15 A. FPL has maintained an extremely reliable power generating system for many
16 years. Since 1998, FPL has improved the operating performance of its generating
17 units in all areas, while reducing fossil non-fuel O&M cents/kWh. However,
18 increases in costs due to system growth and plant maintenance require FPL to
19 seek rate relief in order to maintain system reliability.

FPL's NON-FUEL O&M EXPENSES AND CAPITAL EXPENDITURES

Q. What has been FPL's experience with non-fuel O&M expenses associated with fossil units in recent years?

A. From 1998 to 2004, FPL's total non-fuel O&M expense for fossil units, as measured in cents/kWh, declined 23%, from 0.31 cents/kWh in 1998 to 0.24 cents/kWh in 2004, as shown in Document WLY-6. From 1990, our non-fuel O&M cents/kWh has declined 62%. However, as shown in Document WLY-7, FPL's year-end non-fuel O&M costs were relatively flat from \$154.2 million in 2002, to \$151.1 million in 2004.

Q. Does FPL expect non-fuel O&M expenses to remain constant in 2005 and 2006?

A. No. FPL forecasts an increase in O&M expenses to approximately \$162 million in 2005, and a further increase of \$23 million in 2006 to \$185 million.

Q. What is the reason for the increases in fossil non-fuel O&M expenses?

A. One of the primary reasons fossil non-fuel O&M expenses are increasing is because FPL is adding power plants to its system to meet the growing needs of its customers. Specifically, the addition of the Martin and Manatee units in 2005 is a significant O&M cost driver. Another O&M cost driver is plant maintenance costs associated with overhauls of fossil units to allow FPL to sustain plant availability and reliability. FPL has an aging conventional steam fleet, with generating units that range in age from 23 to 50 years in service. These units will require additional plant maintenance. Maintaining the availability and reliability

1 of the conventional steam fleet benefits the customer by not having to replace this
2 generation.

3 **Q. Has FPL taken any steps to reduce fossil non-fuel O&M expenses associated**
4 **with maintaining the units?**

5 A. Yes. To control costs, FPL transitioned from calendar-based to condition-based
6 maintenance and adopted a "Fleet Team" approach. FPL organized its technical
7 support groups around the major plant components, such as boilers, combustion
8 turbines, and generators. The Fleet Team approach improves the replication and
9 standardization of best practices across the fleet.

10
11 FPL transitioned its major maintenance overhaul philosophy from calendar-based
12 overhaul intervals to condition-based overhaul intervals. By doing overhauls on a
13 condition-based interval, FPL can optimize the life of the existing plant
14 components while improving plant reliability and availability.

15
16 FPL further enhanced its fleet with the creation of the Fleet Performance and
17 Diagnostic Center. Critical fossil plant operating parameters are monitored
18 "24/7" online. Automated statistical analysis detects and alerts employees of any
19 slight change in performance. FPL can also analyze the equipment's ability to
20 perform according to its rated specifications and evaluate ways to improve
21 efficiencies. The goal is to identify equipment degradation far enough in advance
22 of a failure so corrective measures can be put in place.

23

1 All of FPL's initiatives and efforts are focused on achieving process control and
2 preventing failures from occurring.

3
4 The Power Generation Division's mission and commitment to the customer can
5 be summarized in two words: Deliver Certainty - the certainty that our generating
6 units are cost-effective, available, and reliable, to meet the needs of the customer.

7 **Q. Can improvements in maintenance processes continue to enable FPL to keep**
8 **the level of O&M expenses relatively constant?**

9 A. No. Condition-based maintenance has optimized the useful life of plant
10 components, resulting in cost benefits to the customer. FPL is at the point now
11 that it must perform extensive maintenance and refurbishments to sustain the
12 outstanding reliability of its existing fleet.

13 **Q. What assurance can you give the Commission that FPL's 2006 forecast for**
14 **non-fuel O&M expenses is reasonable?**

15 A. First, the Company's historical performance demonstrates its ability to cost-
16 effectively manage its resources while achieving industry-leading performance in
17 the areas of EAF, EFOR and net heat rate.

18
19 Second, FPL's forecasted 2006 non-fuel O&M costs, in terms of cents/kWh,
20 represent continued outstanding performance. Even with the inclusion of the new
21 units (Martin Unit 8 and Manatee Unit 3), FPL is forecasting its 2006
22 performance of 0.26 non-fuel O&M cents/kWh, to continue to exemplify superior
23 performance.

1 Third, FPL has the processes, procedures and structure in place, such as
2 condition-based maintenance, the Fleet Performance and Diagnostic Center, and
3 the Fleet Teams to continue to manage, assess and sustain the excellent
4 performance of FPL's fossil generation portfolio. FPL's team is committed to
5 maintaining the industry-leading performance it has achieved in availability,
6 reliability, safety, efficiency and cost.

7 **Q. Please summarize FPL's capital expenditures required to sustain its fossil**
8 **units for the period 2002 - 2006.**

9 A. As shown in Document WLY-8, FPL experienced a significant increase in capital
10 expenditures from 2002 to 2003. In 2002, FPL's capital expenditures were \$89.3
11 million, and in 2003, that amount increased to \$259.9 million. Of the 2003 total,
12 \$192 million is attributed to the purchase of combustion turbine wear parts to
13 support outages of FPL's growing fleet. In 2004, capital expenditures decreased
14 to \$186.1 million, but FPL projects increases to a level of \$200.5 million in 2005
15 and \$219.6 million in 2006. FPL's projection for capital expenditures for 2006 is
16 approximately 146% greater than 2002 capital expenditures.

17 **Q. What are the capital cost drivers for sustaining FPL's fossil unit fleet?**

18 A. The primary drivers are the growth of the fleet and the increasing proportion of
19 combustion turbines as part of the fleet. In 1998, FPL had 42 generators in the
20 fleet. This is forecast to increase to 68 by the year 2006, a 62% increase,
21 including the additions of Martin 8 and Manatee 3 which are discussed later in my
22 testimony.

23

1 These new generators are primarily combustion turbine generators, which will be
2 used in combination with steam turbines to provide power generation in what is
3 called a combined cycle power plant. This type of power plant uses
4 approximately 30% less fuel than our traditional, and older steam turbine fleet.
5 Thus, FPL's customers benefit from this newer technology. Because of the high
6 fuel efficiency, these plants run in a base load configuration. In order to sustain
7 the high reliability and availability of these plants, a major outage may be
8 required within two years or less after the commercial operation date.

9
10 Three types of outages are required on combustion turbines. After approximately
11 12,000 equivalent hours of operation, a combustion turbine must go through a
12 "combustor inspection" outage. After approximately 24,000 equivalent hours of
13 operation, the combustion turbine must have a "hot gas path" outage. After
14 approximately 48,000 equivalent hours of operation, the combustion turbine must
15 have a "major inspection" outage. In all three of these outages, various parts are
16 replaced because they essentially wear out during the operating cycle. On
17 average, each turbine requires approximately \$3 to \$4 million dollars in capital
18 per year to sustain its excellent availability and reliability performance. This will
19 allow FPL to continue to provide the customer with the most efficient generation
20 from the fleet.

21 **Q. Are there steps that FPL can take to control or reduce capital expenditures?**

22 A. The number of generators in FPL's fossil fleet is forecast to grow 62% for the
23 period 1998 – 2006. These generators are primarily combustion turbine

1 generators. The capital expenditures necessary to sustain the performance of
2 these combustion turbines are substantial, and the benefits to customers from such
3 performance are real. With the growing number of combustion turbines in FPL's
4 fleet, FPL will not be able to continue to absorb the capital expenditures
5 associated with sustaining the operation of this equipment. Base rate relief is
6 required for FPL to sustain the excellent performance of its fleet and continue to
7 provide the customer with fuel efficient generation.

8
9 **ADDITION OF MARTIN UNIT 8 AND MANATEE UNIT 3**

10 **Q. What unit additions are planned for 2005?**

11 **A.** In Docket No. 020262-EI and Docket No. 020263-EI, the Commission
12 determined that Martin Unit 8 and Manatee Unit 3 are needed to maintain FPL's
13 system reliability and integrity, and are the most cost effective alternatives for
14 meeting FPL's resource needs in 2005. These units were also approved by the
15 Governor and Cabinet, and are scheduled to begin commercial operation in the
16 summer of 2005. The Martin Unit 8 expansion project consists of 789 megawatts
17 of new capacity additions to two existing combustion turbine units, Martin Units
18 8A and 8B. When the expansion project is completed, Martin Unit 8, a
19 combined-cycle power plant, is estimated to produce a summer net capacity of
20 1,107 megawatts. Manatee Unit 3, when complete, will be a combined-cycle
21 plant, and is estimated to produce a summer net capacity of 1,107 megawatts.

1 **Q. What are the forecasted total installed costs for Martin Unit 8 and Manatee**
2 **Unit 3?**

3 A. The total installed cost for Martin Unit 8 is forecast to be \$403.6 million, and the
4 total installed cost for Manatee Unit 3 is forecast to be \$483.2 million. These
5 costs are less than those approved by the Commission in Docket Nos. 020262-EI
6 and 020263-EI. FPL's construction costs for Martin Unit 8 and Manatee Unit 3
7 demonstrate FPL's ability to successfully manage and deploy resources to cost
8 effectively meet the needs of its customers.

9 **Q. What are FPL's forecasted annual operating expenses for the first full year**
10 **of operation for Martin Unit 8 and Manatee Unit 3?**

11 A. In 2006, the first full year of operation for the new units, FPL expects the annual
12 operating expenses associated with both of the new units to be approximately \$7.1
13 million.

14 **Q. Are these forecasted annual operating costs reasonable?**

15 A. Yes. The expected annual operating costs average approximately \$3.5 million
16 each for Martin Unit 8 and Manatee Unit 3. These costs are consistent with the
17 operating costs FPL projected in Docket Nos. 020262-EI and 020263-EI, in which
18 the Commission determined Martin Unit 8 and Manatee Unit 3 to be the most
19 cost-effective alternatives.

20

21

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23

2007 TURKEY POINT UNIT 5 ADJUSTMENT

1
2 **Q. Does FPL plan to bring any new capacity into service during 2007?**

3 A. Yes. The addition of Turkey Point Unit 5, as approved by the Commission in
4 Docket No. 040206-EI to be the most cost-effective alternative to meet FPL's
5 capacity needs in 2007, is scheduled to commence commercial operation on June
6 1, 2007. Turkey Point Unit 5, when complete, will be a combined-cycle power
7 plant, and is estimated to produce a summer net capacity of approximately 1,144
8 megawatts. The total installed cost for the project is forecasted to be \$580.3
9 million, which is the estimated cost for the unit approved by the Commission in
10 Docket No. 040206-EI.

11 **Q. What is the status of Turkey Point Unit 5?**

12 A. In February 2005, the Governor and Cabinet sitting as the Florida Electrical
13 Power Plant Siting Board, approved FPL's site certification application to
14 commence construction of Turkey Point Unit 5. Environmental permitting for the
15 unit is underway and construction of the unit began in March of 2005.

16 **Q. What is the forecasted annual operating cost for Turkey Point Unit 5?**

17 A. FPL forecasts the direct annual operating cost for the first full year of operation
18 will be approximately \$3.6 million.

19 **Q. Are these forecasted annual operating costs for Turkey Point Unit 5**
20 **reasonable?**

21 A. Yes. The forecasted annual operating costs are consistent with the costs FPL
22 projected in Docket No. 040206-EI, in which the Commission approved Turkey

1 Point Unit 5 to be the most cost-effective alternative to meet FPL's capacity needs
2 in 2007.

3
4 **CONCLUSION**

5 **Q. Please summarize your testimony.**

6 A. The performance of FPL's fossil fleet of generating units is superior, as evidenced
7 by FPL's consistent industry-leading performance. In the areas of plant
8 operations and maintenance, FPL has achieved a plant availability performance of
9 93.7% and a plant equivalent forced outage rate performance of 1.1% year-ending
10 2004. This superior plant availability and reliability performance allows FPL to
11 continue to provide customers with the most fuel-efficient generation within the
12 fleet, and continue to pass on fuel savings to the customer. Further, the high
13 availability and low forced outage rates of FPL's fossil units have helped FPL
14 avoid or defer the need to add additional capacity to the system. However, there
15 is little room for additional improvements to FPL's already outstanding
16 performance in these areas, and FPL will be adding generating resources, at a
17 substantially faster rate, over the next several years.

18
19 What makes FPL's fossil plant performance more remarkable is that, while
20 performance has improved, total operating costs have been reduced 23%, from
21 0.31 cents/kWh in 1998 to 0.24 cents/kWh in 2004. FPL expects its O&M
22 expenses to increase in the coming years as a result of new plant additions and
23 plant major maintenance. Capital costs are also increasing primarily from the

1 need to invest in combustion turbine wear parts to support outages for FPL's
2 growing fleet. FPL will not be able to absorb the increases in O&M expenses and
3 capital expenditures and must seek an increase in base rates to maintain system
4 reliability.

5
6 FPL will be adding generating resources at a substantially faster rate over the next
7 several years in order to meet the growing needs of its customers. Martin Unit 8
8 and Manatee Unit 3 are scheduled to begin commercial operation in the summer
9 of 2005. On a combined basis, when these units are complete, they will add more
10 than 2,200 megawatts (summer net capacity) of natural gas-fired combined-cycle
11 generation to FPL's system. FPL forecasts the total costs of these units will be
12 less than the costs included in the request for proposals (RFP) that led to the
13 selection of these units as the most-cost effective alternative for maintaining the
14 reliability of FPL's system.

15
16 FPL's ability to control costs on the Martin and Manatee construction projects
17 demonstrates that FPL can meet or exceed its performance in the areas of
18 construction management, cost control, plant operations and start-up of plants.
19 FPL will replicate the processes used at Martin and Manatee as it constructs and
20 transitions Turkey Point Unit 5 into the fossil fleet on June 1, 2007.

21
22 FPL has provided customers with outstanding performance in the areas of cost
23 control and plant operating performance. FPL has the leadership, management

1 systems, and processes in place to sustain this performance while growing the
2 generating fleet. As discussed above, FPL's ability to maintain the reliability of
3 the system to serve customer needs requires an increase in the level of base rates.

4 **Q. Does this conclude your direct testimony?**

5 **A. Yes.**

1 ratemaking purposes. My testimony also addresses OPC Witness Larkin's
2 assertion that FPL may experience a reduction in Operating and Maintenance
3 (O&M) expenses and labor costs when Turkey Point Unit 5 is placed in service.
4

5 **GENERAL ELECTRIC TURBINE TRANSACTION**

6 **Q. Was FPL's turbine purchase inappropriate, as alleged by Ms. Dismukes?**

7 A. No. As Mr. Davis discusses in his rebuttal testimony, FPL's purchase of the
8 turbine complied with the Commission's rule on affiliate transactions. As stated
9 in FPL's supplemental answer to OPC Interrogatory number 335, served July 18,
10 2005, and attached as Document No. WLY-9, "FPL purchased the combustion
11 turbines directly from GE in 2002 *and 2003*" (emphasis added). FPL Group had a
12 volume purchase agreement with GE that gave FPL Group companies the ability
13 to contract for turbine purchases at a significantly advantageous price. As a result
14 of the volume purchase agreement, FPL also received subsequent discounts for
15 turbine wear part purchases. Once FPL decided to purchase the turbine from GE,
16 FPL reimbursed FPL Group Capital for costs that it had incurred for Unit 38
17 before the utility decided to purchase the unit.

18 **Q. Has FPL produced documents that demonstrate the units were purchased by**
19 **the utility directly from GE in the course of discovery in this Docket?**

20 A. Yes. Documents were provided to OPC in their first and eleventh request for
21 Production of Documents numbers 118 and 283, respectively. Exhibit WLY-10,
22 also produced in discovery, shows the contract change order between GE and FPL
23 for Unit 38.

1 **Q. Did customers benefit from the purchase of Unit 38?**

2 A. Yes. Customers benefited from the purchase of Unit 38 because it has provided
3 spare components to support the availability and reliability of the combustion
4 turbine generation fleet. By having spare components available, FPL can
5 minimize overall outage times when equipment failures occur.

6
7 In the summer of 2003, one of the combustion turbines at the Martin plant site
8 experienced a catastrophic failure resulting in the loss of this fuel efficient
9 generation from the system. Unit 38 provided critical components in order to
10 return the affected combustion turbine to service in less than two months, and to
11 help prevent a similar failure in another combustion turbine at the Martin plant
12 site. Had the spare components from Unit 38 not been available, outage durations
13 would have at least doubled by having to wait on spare components to be
14 manufactured by GE. Extended outages would have resulted in the customer
15 paying substantially more for FPL to run less efficient fuel generating units or
16 purchase replacement power, if available, on the market. Further, the customer
17 would have had to pay expediting charges for non-stocked combustion turbine
18 parts. Unit 38 parts that were not immediately used for the Martin site work have
19 helped defer the purchase of other planned CT spare parts for FPL's combustion
20 turbine fleet or are helping protect the fleet from other low probability, high-
21 impact events.

22 **Q. Did FPL investigate other sources for Martin unit replacement components?**

1 A. Yes. However, the Martin combustion turbine original equipment manufacturer is
2 GE, which was the only supplier that could provide components in a timely
3 manner. These components were crucial in returning the Martin site to service.
4 There was a savings to customers from purchasing the unassembled Unit 38 as
5 compared to what it would have cost to individually purchase the component
6 parts.

7 **Q. What is your conclusion with respect to Ms. Dismukes' proposed adjustment**
8 **to rate base?**

9 A. The Commission should reject Ms. Dismukes' proposed rate base adjustment.
10 Unit 38 is used and useful on FPL's system, and Unit 38 was purchased by FPL
11 from GE at a significantly advantageous price as compared to the market price.
12

13 **2007 TURKEY POINT 5 ADJUSTMENT**

14 **Q. Are the estimated construction and operating costs of Turkey Point Unit 5**
15 **speculative?**

16 A. No. Regarding the 2007 adjustment, OPC Witness Mr. Larkin states "[i]t is very
17 unlikely that many of the Company's projections for that test year will be
18 accurate." FPL has contracts in place for major equipment and Engineering,
19 Procurement & Construction, and it is highly unlikely the costs associated with
20 these contracts will change. These contracts represent the vast majority of
21 construction costs associated with the new unit.

22 **Q. Please respond to Mr. Larkin's contention on page 14, lines 11 through 16,**
23 **that "[i]f one assumes that the generation available from Turkey Point Unit 5**

1 were used to offset or eliminate generation from other units on the
2 Company's system, then one must question why the adjustments proposed by
3 Company witnesses Davis, Dewhurst, and Yeager did not reflect reductions
4 in O&M costs, labor cost, etc. from the removal of those units or reduction of
5 use of those units, which would be replaced by Turkey Point Unit 5."

6 A. The level of O&M expenses and labor costs FPL will experience when Turkey
7 Point Unit 5 is placed in service is consistent with FPL's projections for 2006.
8 Turkey Point Unit 5 will be included as additional generation in satisfying the
9 firm capacity and energy needs of FPL's customers. Turkey Point Unit 5 will be
10 dispatched as a base-line generating unit, while less fuel-efficient generating units
11 will run less frequently. Less fuel-efficient units will cycle more frequently on an
12 as-needed basis. The cycling mode of operation produces relatively more wear on
13 the mechanical components and therefore will not afford a reduction in O&M
14 expenses as suggested by Mr. Larkin. Labor costs also will not decrease because
15 cycling units require the same level of personnel to operate and maintain power
16 generating systems and components.

17 Q. Does this conclude your rebuttal testimony?

18 A. Yes.

1 STATE OF FLORIDA)
 : CERTIFICATE OF REPORTER
2 COUNTY OF LEON)

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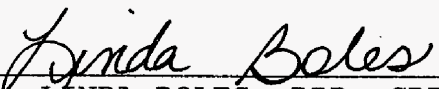
4 I, LINDA BOLES, RPR, CRR, Official Commission
Reporter, do hereby certify that the foregoing prefiled
5 testimony was assembled under my direct supervision.

6 I FURTHER CERTIFY that I am not a relative, employee,
attorney or counsel of any of the parties, nor am I a relative
7 or employee of any of the parties' attorneys or counsel
connected with the action, nor am I financially interested in
8 the action.

9 DATED THIS 24TH DAY OF AUGUST, 2005.

10

11



LINDA BOLES, RPR, CRR
FPSC Official Commission Reporter
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