

**BEFORE THE FLORIDA
PUBLIC SERVICE COMMISSION**

**DOCKET NO. 080677-EI
FLORIDA POWER & LIGHT COMPANY**

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

TESTIMONY & EXHIBITS OF:

C. RICHARD CLARKE

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1 **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

2 **FLORIDA POWER & LIGHT COMPANY**

3 **DIRECT TESTIMONY OF C. RICHARD CLARKE**

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5

6 **Q. Would you please state your name and business address.**

7 A. My name is C. Richard Clarke. My business address is 5062 Alfingo Street, Las
8 Vegas, Nevada, 89135.

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

10 A. I am Director of Western U.S. Services for the Valuation and Rate Division of
11 Gannett Fleming, Inc. (Gannett Fleming). The Valuation and Rate Division of
12 Gannett Fleming provides depreciation consulting services to utility companies
13 in the United States and Canada. As Director of Western U.S. Services, I am
14 responsible for conducting depreciation, valuation and original cost studies,
15 determining service life and salvage estimates, conducting field reviews,
16 presenting recommended depreciation rates to clients, and supporting such rates
17 before state and federal regulatory agencies.

18 **Q. What is your educational background?**

19 A. I have a Bachelor of Science degree in Business Management from Northeastern
20 University in Boston and an Associate of Engineering Degree in Industrial
21 Technology.

1 **Q. Do you belong to any professional societies?**

2 A. Yes. I am a member of the Society of Depreciation Professionals (the Society)
3 and the American Gas Association (AGA) and Edison Electric Institute (EEI)
4 industry Accounting Committee (AGA/EEI). I have served as Chairman of the
5 Society of Depreciation Professionals and currently serve on their Board of
6 Directors, and have been Chairman of the AGA/EEI Property Accounting
7 Committee twice. I am also an instructor for depreciation training sponsored by
8 the Society and taught classes at AGA/EEI.

9 **Q. Do you hold any special certification as a depreciation expert?**

10 A. Yes. The Society has established national standards for depreciation
11 professionals. The Society administers an examination to become certified in
12 this field. I passed the certification exam in September 1997, and was
13 recertified in August 2003 and in February 2008.

14 **Q. Please outline your experience in the field of depreciation.**

15 A. I joined Gannett Fleming in August 2004. My experience prior to joining
16 Gannett Fleming included twelve years, 1967-1979 with United Engineers, a
17 large engineering firm with head offices in Philadelphia and Boston where I
18 spent six years as a Utilities Consultant in the area of valuation and six years as
19 a design engineer. In 1979, I joined Southern California Edison. In my twenty-
20 five years with Southern California Edison, I held positions of Valuation
21 Analyst, Valuation Engineer, Senior Valuation Engineer, Manager of Capital
22 Recovery and Manager of Property Accounting. My responsibilities were for
23 recorded and estimated book depreciation, capital forecasting, rate base

1 including working cash, tax depreciation and related tax information, ad valorem
2 taxes, and property valuation studies. I was the company witness for
3 depreciation and rate base. While at Southern California Edison, I was the
4 Company representative on the Property and Valuation Committee of the EEI.

5 **Q. Have you submitted testimony to any utility commissions on the subject of**
6 **utility plant depreciation?**

7 A. Yes. I have submitted testimony to the California Public Utility Commission,
8 the Public Utilities Commission of Nevada, the Washington Utilities and
9 Transportation Commission and to the Federal Energy Regulatory Commission
10 (FERC) on several occasions. A list of proceedings where I have submitted
11 testimony is attached to this testimony as Exhibit CRC-2.

12 **Q. Have you received any additional education relating to utility plant**
13 **depreciation?**

14 A. Yes. I have completed the following courses conducted by Depreciation
15 Programs, Inc.: “Techniques of Life Analysis,” “Techniques of Salvage and
16 Depreciation Analysis,” “Forecasting Life and Salvage,” “Modeling and Life
17 Analysis Using Simulation” and “Managing a Depreciation Study.” I have also
18 completed the “Introduction to Public Utility Accounting” and “Advanced
19 Public Utility Accounting” programs conducted by the American Gas
20 Association.

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

22 A. I am sponsoring the results of a new Depreciation Study (the Depreciation
23 Study) that I prepared for Florida Power & Light Company (FPL). The

1 Depreciation Study covers depreciable electric properties in service as of the last
2 date of the previous full calendar year, December 31, 2007, and actual and
3 projected plant and reserve balances through the end of 2009.

4 **Q. Are you sponsoring any exhibits in this case?**

5 A. Yes. I am sponsoring the following exhibits:

- 6 • CRC-1: Depreciation Study.
- 7 • CRC-2: List of Public Utility Commissions where I have testified and
8 issues that I addressed.

9 **Q. Are you sponsoring any Minimum Filing Requirements (MFRs) in this**
10 **case?**

11 A. No.

12 **Q. Would you please summarize your testimony?**

13 A. My testimony will explain the methods and procedures of the Depreciation
14 Study as well as set forth the annual depreciation rates that result from the
15 Depreciation Study. The Depreciation Study includes comparison schedules
16 showing current and proposed depreciation parameters including average service
17 lives, net salvage percentages, depreciation rates, depreciation accruals as well
18 as a comparison of the theoretical reserve to the booked reserve at December 31,
19 2009. I also provide additional detail on each section of the Depreciation Study
20 in my testimony.

1 **METHODS USED IN THE DEPRECIATION STUDY**

2

3 **Q. Please define the concept of depreciation.**

4 A. Depreciation refers to the loss in service value not restored by current
5 maintenance, incurred in connection with the consumption or prospective
6 retirement of utility plant in the course of service from causes that can be
7 reasonably anticipated or contemplated, against which the Company is not
8 protected by insurance. Among the causes to be given consideration are wear
9 and tear, decay, action of the elements, inadequacy, obsolescence, technological
10 changes, changes in demand and the requirements of public authorities.

11 **Q. In preparing the Depreciation Study, did you follow generally accepted**
12 **practices in the field of depreciation and valuation?**

13 A. Yes. These methods and practices are detailed in my testimony.

14 **Q. Please describe the contents of your Depreciation Study.**

15 A. My study is presented in five parts:

- 16 • Part I, Introduction, presents the scope and basis for the Depreciation
17 Study.
- 18 • Part II, Methods Used in the Estimation of Depreciation, includes
19 descriptions of the basis of the study, the estimation of survivor curves
20 and net salvage and the calculation of annual and accrued depreciation.
- 21 • Part III, Summary Results of Study, presents a description of the results
22 and summaries of the depreciation calculations separately by Functional
23 Class of plant.

- 1 • Part IV, Detail of Generation Plant, provides a description of the
2 generating units and shows by account, the depreciation calculations.
3 Also included in this part is a presentation of the life analysis and
4 salvage analysis including graphs for each generation account.
- 5 • Part V, Detail of Transmission, Distribution and General Plant, provides
6 a description of transmission, distribution and general plant by account.
7 Also included are the results of the life analysis, the salvage analysis and
8 the depreciation calculations.

9 **Q. Please identify the depreciation method that you used.**

10 A. I used the straight line remaining life method of depreciation, with the average
11 service life procedure. The annual depreciation is based on a method of
12 depreciation accounting that seeks to distribute the unrecovered cost of fixed
13 capital assets over the estimated remaining useful life of each unit, or group of
14 assets, in a systematic and rational manner.

15
16 In compliance with the Florida Public Service Commission (“FPSC” or the
17 “Commission”) rules of depreciation prescribed in Rule 25-6.0436, Florida
18 Administrative Code (F.A.C.), depreciation rates are also presented using the
19 whole life method. Theoretical reserves were calculated using the remaining life
20 method and compared with the actual book reserves.

21 **Q. Did you review prior Commission orders on FPL’s depreciation accrual**
22 **rates?**

1 A. Yes. I reviewed the following Commission Orders: No. PSC-05-0902-S-EI --
2 stipulation and settlement order, No. PSC-05-0499-PCO-EI -- consolidation of
3 dockets, No. PSC-08-0491-PAA-EI -- solar energy, No. PSC-04-0609-FOF-EI -
4 - Turkey Point Unit 5 and PSC-05-0821-PAA-EI -- Manatee Unit 3 and Martin
5 Unit 8.

6 **Q. What are your recommended annual depreciation accrual rates for FPL?**

7 A. My recommended annual depreciation accrual rates are the remaining life rates
8 set forth in Table 1 on page III-5 for Production Plant by function, Table 11 on
9 page IV-4 for production plant by unit and Table 6 on page III-10 for
10 Transmission, Distribution, and General Plant functions. These rates were
11 developed using the same methodology used by FPL in their last depreciation
12 study and follow the rules of depreciation prescribed by the FPSC previously
13 discussed.

14 **Q. How did you determine the recommended annual depreciation accrual**
15 **rates?**

16 A. I did this in two phases. In the first phase, I estimated the service life and net
17 salvage characteristics for each depreciable group - that is, each plant account or
18 subaccount identified as having similar characteristics. In the second phase, I
19 calculated the composite remaining lives and annual depreciation accrual rates
20 based on the service life and net salvage estimates determined in the first phase.

1 **SERVICE LIVES AND NET SALVAGE**

2

3 **Q. Please describe the first phase of the Depreciation Study, in which you**
4 **estimated the service life and net salvage characteristics for each**
5 **depreciable group.**

6 A. The service life and net salvage study consisted of compiling historic data from
7 records related to FPL's plant; analyzing these data to obtain historic trends of
8 survivor and net salvage characteristics; obtaining supplementary information
9 from management and operating personnel concerning accounting and
10 operating practices and plans; and interpreting the above data and the estimates
11 used by other electric utilities to form judgments of average service life and net
12 salvage characteristics.

13 **Q. What historic data did you analyze for the purpose of estimating service life**
14 **characteristics?**

15 A. I analyzed the Company's accounting entries that record plant transactions
16 during the period 1941 through 2007. The transactions included additions,
17 retirements, transfers and the related balances. The Company records also
18 included surviving dollar value by year installed for each plant account as of
19 December 31, 2007. The results of these analyses were incorporated into plant
20 and reserve forecasts for 2008 and 2009 to calculate the annual accrual as of
21 December 31, 2009.

22 **Q. What methods are generally used to analyze service life data?**

23 A. There are two methods widely used in a typical depreciation study to estimate a

1 survivor curve for a group of plant assets; these are the Retirement Rate Method
2 and the Simulated Plant Balances Method. The data at FPL are kept in a manner
3 that enabled us to use the Retirement Rate Method.

4
5 The Retirement Rate Method is an actuarial method of deriving survivor curves
6 using the average rates at which property of each age group is retired. The
7 method relates to property groups for which aged accounting experience is
8 available or for which aged accounting experience is developed by statistically
9 aging unaged amounts. This method has been illustrated through the use of an
10 example in Section II of the Depreciation Study.

11

12 The Simulated Plant Balance Method is used for property groups for which the
13 retirements of property by age are not known. However, it does require
14 continuous records of vintage plant additions and year-end plant balances. The
15 method suggests probable survivor curves for a property group by successively
16 applying a number of alternative survivor curves to the group's historical
17 additions in order to simulate the group's surviving balance over a selected
18 period of time. One of the several survivor curves which result in simulated
19 balances that conform most closely to the book balance may be considered to be
20 the survivor curve which the group under study is experiencing.

21 **Q. Did you use the previously mentioned approach to estimate the lives of**
22 **production facilities?**

23 **A. No. For production facilities the life span technique was used to estimate the**

1 lives of electric generation facilities, for which concurrent retirement of the
2 entire facility is anticipated. In this technique, the survivor characteristics of
3 such facilities are described by the use of interim retirement survivor curves and
4 economic recovery dates. The interim survivor curve describes the rate of
5 retirement related to the replacement of elements of the facility, such as for a
6 building, the retirements of plumbing, heating, doors, windows, roofs, etc. that
7 occur during the life of the facility. The economic recovery date, an estimate of
8 the probable retirement date, of a facility based on its anticipated operating life,
9 affects each year of installation for the facility by truncating the interim survivor
10 curve for each installation year at its attained age as of that date. The use of
11 interim survivor curves truncated at these dates provides a consistent method of
12 estimating the lives of several years' installation for a particular facility
13 inasmuch as a single concurrent retirement for all the years of installation will
14 occur at that specified date.

15 **Q. Has Gannett Fleming used this approach in other proceedings?**

16 A. Yes, we have used the life span technique in performing depreciation studies
17 presented to many public utility commissions across the United States and
18 Canada.

19 **Q. What are the economic recovery dates and what was your basis for each
20 selection?**

21 A. The Company provided me with the economic recovery dates and their basis for
22 each of the facilities using the life span approach. The economic recovery dates
23 for each facility is provided in the Depreciation Study in Section II on pages II-

1 26 and II-27.

2 **Q. Are there any major changes in generation plant from FPL's previous**
3 **study?**

4 **A. Yes, there are a number of changes taking place in generation that are included**
5 **in the Depreciation Study.**

6 1. The Company will complete and put in service two 1200 MW Combined
7 Cycle units in 2009 at its West County site. A third 1200 MW
8 Combined Cycle plant at its West County site is scheduled for operation
9 in 2011.

10 2. The Company is also planning to complete and place in service three
11 solar plants in the next couple of years. The 25 MW DeSoto Solar
12 Energy Center, which uses photovoltaic panels, will be placed in service
13 in 2009 and is included in the Depreciation Study. Another 10 MW
14 photovoltaic plant, Spacecoast Solar Energy Center is scheduled for
15 2010. A 75 MW thermal array facility, the Martin Solar Energy Center,
16 scheduled for operation at FPL's Martin Plant site, is also scheduled to
17 be placed in service in 2010.

18 3. FPL is modernizing two Steam Generating plants: Cape Canaveral Units
19 1 and 2, and Riviera Units 3 and 4. These modernizations are scheduled
20 to go in-service in 2013 and 2014 respectively.

21 4. The nuclear units at Turkey Point and St. Lucie are scheduled for major
22 upgrades (uprates) which will increase the output an additional 104 MW
23 per generating unit at Turkey Point and 103 MW per generating unit at

1 St. Lucie. These uprates are scheduled to go into service in phases
2 between 2010 and 2012.

3 **Q. Did you use statistical survivor characteristics to estimate average service**
4 **lives of the property**

5 A. Yes. I used Iowa-type survivor curves.

6 **Q. What is an “Iowa-type survivor curve” and how did you use such curves to**
7 **estimate the service life characteristics for each property group?**

8 A. Iowa-type curves are a widely used group of generalized survivor curves that
9 contain the range of survivor characteristics usually experienced by utilities and
10 other industrial companies. The Iowa curves were developed at the Iowa State
11 College Engineering Experiment Station through an extensive process of
12 observing and classifying the ages at which various types of property used by
13 utilities and other industrial companies had been retired.

14

15 Iowa-type curves are used to smooth and extrapolate original survivor curves
16 determined by the retirement rate method. Iowa curves were used in this study
17 to describe the forecasted rates of retirement based on the observed rates of
18 retirement and the outlook for future retirements.

19

20 The estimated survivor curve designations for each depreciable property group
21 indicate the average service life, the family within the Iowa system to which the
22 property group belongs, and the relative height of the mode. For example, an
23 Iowa 50 R2 designation indicates an average service life of fifty years; a right-

1 moded, or R-type curve (the mode occurs after average life for right-modded
2 curves); and a moderate height, two, for the mode (possible modes for R-type
3 curves range from 1 to 5).

4 **Q. Did you physically observe FPL's plant and equipment as part of your**
5 **Depreciation Study?**

6 A. Yes. I held meetings with operating personnel and made field visits to FPL
7 property to observe representative portions of plant. Meetings and field reviews
8 were conducted to become familiar with Company operations and obtain an
9 understanding of the function of the plant and information with respect to the
10 reasons for past retirements and the expected future causes of retirements. This
11 knowledge, as well as information from other discussions with management,
12 was incorporated in the interpretation and extrapolation of the statistical
13 analyses. Meetings were held with personnel from Steam Generation, Nuclear
14 Generation, Resource Assessment and Planning, Distribution, Corporate Real
15 Estate, Construction, Meters, Fleet Services, Information Management, and
16 Marketing and Communication Business Units, as well as meetings with
17 accounting personnel.

18 **Q. What facilities did you observe?**

19 A. During the preparation of my study I visited the following facilities and
20 observed operations and maintenance practices at each location. I visited the
21 Turkey Point facility because it had a good representation of all types of
22 generation. I also had a number of meetings with various company personnel in
23 the Generation, Transmission, Meters, Resource Assessment and Planning,

1 Distribution and Accounting Business Units:

2 September 12, 2008

- 3 • Corporate offices - Juno Beach
- 4 • General offices - Miami

5 December 16, 2008

- 6 • Turkey Point nuclear plant
- 7 • Turkey Point steam generating plant
- 8 • Turkey Point combined cycle plant

9 December 17, 2008

- 10 • Ft. Lauderdale combined cycle and gas turbine facilities
- 11 • FPL system control center
- 12 • Meter technology center

13 **Q. Would you please explain the concept of “net salvage”?**

14 A. Net salvage is a component of the service value of capital assets that is
15 recovered through depreciation rates. The service value of an asset is its original
16 cost less its net salvage. Net salvage is the salvage value received for the asset
17 upon retirement less the cost to retire the asset. When the cost to retire exceeds
18 the salvage value, the result is negative net salvage.

19

20 Inasmuch as depreciation expense is the loss in service value of an asset during a
21 defined period (e.g., one year), it must include a ratable portion of both the
22 original cost and the net salvage. That is, the net salvage related to an asset
23 should be incorporated in the cost of service during the same period as its

1 original cost so that customers receiving service from the asset pay rates that
2 include a portion of both elements of the asset's service value, the original cost
3 and the net salvage value.

4

5 For example, the full recovery of the service value of a \$1,000 transformer will
6 include not only the \$1,000 of original cost, but also, on average, \$450 to
7 remove the transformer at the end of its life less \$150 in salvage value. In this
8 example, the net salvage component is negative \$300 ($\$150 - \450), and the net
9 salvage percentage is negative 30% ($(\$150 - \$450)/\$1,000$).

10 **Q. Please describe the criteria you used to estimate net salvage percentages.**

11 A. I reviewed net salvage data from 1986 through 2007. Cost of removal and
12 salvage were expressed as a percent of the original cost of the plant retired, both
13 on an annual basis and a three-year moving average bases. The most recent
14 five-year average was also calculated.

15 **Q. Were there other considerations used in developing your final estimates for
16 net salvage?**

17 A. Yes. After applying the above mentioned criteria to each account, I considered
18 the information provided to me by the Company's operating and maintenance
19 personnel; general knowledge and experience of the industry practices; and
20 trends in the industry in general.

21 **Q. Do the depreciation rates used for electric generating facilities have a
22 component for dismantling?**

1 A. No. FPL has made estimates of final dismantlement for their fossil generation
2 facilities, but as required by the FPSC, these costs are handled separately from
3 regular depreciation and are not part of the Depreciation Study. However, fossil
4 generation dismantlement costs are included separately in this docket, in Exhibit
5 KO-8 sponsored by FPL witness Ousdahl. Net salvage data for fossil
6 production facilities provided in this study only reflects interim retirement
7 activity. End of life costs for nuclear units are addressed separately in
8 decommissioning studies.

9

10 **REMAINING LIVES AND DEPRECIATION RATES**

11

12 **Q. Please describe the second phase of the process that you used in the**
13 **Depreciation Study, in which you calculated composite remaining lives and**
14 **annual depreciation accrual rates.**

15 A. After I estimated the service life and determined net salvage characteristics to
16 use for each depreciable property group, I calculated the annual depreciation
17 accrual rates for each group based on the straight line remaining life method,
18 using remaining lives weighted consistent with the average life procedure. The
19 annual depreciation accrual rates were developed as of December 31, 2007.
20 They were then factored into the estimated plant and reserve for 2008 and 2009
21 to develop depreciation rates as of December 31, 2009.

22 **Q. Please describe the straight line Remaining Life Method of depreciation.**

23 A. The straight line Remaining Life Method of depreciation allocates the original

1 cost of the property, less accumulated depreciation, plus future net salvage, in
2 equal amounts to each year of remaining service life.

3 **Q. Please describe the Average Service Life Procedure for calculating**
4 **remaining life accrual rates.**

5 A. The Average Service Life Procedure defines the group for which the remaining
6 life annual accrual is determined. Under this procedure, the annual accrual rate
7 is determined for the entire group or account based on its average remaining life
8 and this rate is applied to the surviving balance of the group's cost. The average
9 remaining life of the group is calculated by first dividing the future book
10 accruals (original cost less allocated book reserve less future net salvage) by the
11 average remaining life for each vintage. The average remaining life for each
12 vintage is derived from the area under the survivor curve between the attained
13 age of the vintage and the maximum age. Then, the sum of the future book
14 accruals is divided by the sum of the annual accruals to determine the average
15 remaining life of the entire group for use in calculating the annual depreciation
16 accrual rate.

17 **Q. Please use an example to illustrate the development of the annual**
18 **depreciation accrual rate for a particular group of property in your**
19 **Depreciation Study.**

20 A. For purposes of illustrating this process I will use Account 368, Line
21 Transformers. I selected this account because it is one of the largest depreciable
22 groups.

1 The retirement rate method was used to analyze the survivor characteristics of
2 this property group. Aged plant accounting data were compiled from 1941
3 through 2007 and analyzed for periods that best represent the overall service life
4 of this property. The life table for the 1941-2007 experience bands is presented
5 starting on page V-145. The life table displays the retirement and surviving
6 ratios of the aged plant data exposed to retirement by age interval. For example,
7 page V-145 shows \$15,713,491 retired during age interval 1.5-2.5 with
8 \$1,797,545,292 exposed to retirement at the beginning of the interval.
9 Consequently, the retirement ratio is 0.0087 ($\$15,713,491/\$1,797,545,292$) and
10 the surviving ratio is 0.9913 ($1-0.0087$). The percent surviving at age 1.5 of
11 99.72 percent is multiplied by the survivor ratio of 0.9913 to derive the percent
12 surviving at age 2.5 of 98.85 percent. This process continues for the remaining
13 age intervals for which plant was exposed to retirement during the 1941-2007
14 period. The resultant life table, or original survivor curve, is plotted along with
15 the estimated smooth curve. The curve chosen from the analysis alone was a 32
16 L1.5 curve; this is similar to the average life used for this account in the
17 industry. After discussions with company personnel and considering general
18 experience and knowledge of this type of property we decided the 32 L1.5 was a
19 good estimate for this account for FPL. This curve is shown on page V-144 of
20 the Depreciation Study.

21

22 The net salvage percentage chosen for this account is negative 25 percent. The
23 percentage is based on the aforementioned criteria developing net salvage

1 percentages. As shown on page V-147, net salvage has been negative since
2 1986 and has been very consistent at around 20 to 30 percent negative. The
3 five-year average on page V-148 shows negative 23 percent; the last five years
4 of a three-year moving average shows negative net salvage ranging from
5 negative 21 to negative 31 percent. Company personnel mentioned removal
6 costs were not increasing substantially but remain constant. Considering all this
7 information, we used negative 25 percent for this account.

8

9 My calculation of the annual depreciation related to the original cost of Account
10 368, Line Transformers, at December 31, 2009, is presented on pages V-150.
11 The calculation is based on the 32 L1.5 survivor curve, negative 25% net
12 salvage, the attained age, and the allocated book reserve. The tabulation sets
13 forth the installation year, the original cost, calculated accrued depreciation,
14 allocated book reserve, future accruals, remaining life and annual accrual. These
15 totals are brought forward to Table 16 on page V-3.

16 **Q. Were you able to develop results for every depreciable account in the**
17 **company using the above-mentioned statistical methods?**

18 A. Yes. The above-mentioned statistical methods were performed on every
19 account. Information obtained from Company personal, comparisons to other
20 electric utilities and experience and knowledge in the electric utility industry
21 were factored into the final results.

22 **Q. How was the above-mentioned statistical method applied to life span**
23 **properties?**

1 A. Where electric production plant had specific economic recovery dates, the life
2 span technique was employed in conjunction with the use of interim survivor
3 curves. An interim survivor curve was estimated for each plant account using
4 the aforementioned criteria and then the survivor curve was truncated at the end
5 of the life span developed for each property group.

6 **Q. Were there any accounts for which you used a methodology different from
7 that described above?**

8 A. Yes. For Account 370, Meters, we used a different approach. The Company is
9 replacing approximately 4.3 million residential and small commercial meters
10 with Automated Meter Infrastructure (AMI) meters in the next 5 years. Using
11 Company projections of the dollar amounts of current meters to be replaced each
12 year over this period, we isolated these meters to be retired and set them up as a
13 capital recovery schedule to be amortized over a four-year period, consistent
14 with previous Commission practice. A life analysis was performed on the
15 remaining meters based on history. I recommend that these meters be
16 depreciated using the results of that life analysis, which showed a 36 R2.5 life
17 and curve was the best estimate. The new AMI meters have been separated into
18 a new account and will be depreciated using a 20 R2.5 life and curve.

19 **Q. Did you use this same methodology for the general plant accounts?**

20 A. Yes, for the general plant accounts that are depreciated. However, most of the
21 general plant accounts are amortized in accordance with amortization periods
22 prescribed by the FPSC.

23 **Q. What were your overall results of your life analysis?**

1 A. The overall results showed an increase in average service lives for most
2 accounts. This is a result of fewer retirements being made and equipment
3 staying in service longer. This is typical of the electric utility industry today.
4 The analysis also showed some increases in negative net salvage, which is
5 attributable to the rising cost of removal.

6

7 **FACTORS AFFECTING DEPRECIATION EXPENSE**

8

9 **Q. What are the major factors that affect the depreciation expense resulting**
10 **from application of the Depreciation Study?**

11 A. It is difficult to correlate exact changes in depreciation expense with the changes
12 in plant, reserve and depreciation parameters. The changes in expense by class
13 of plant can be estimated by making a comparison of depreciation accruals using
14 approved existing rates versus proposed rates on the plant in service at
15 December 31, 2009. Overall, the depreciation expense decreased by
16 approximately \$8.8 million. The changes discussed below do not include any
17 reserve adjustments for the annual depreciation expense credit, which I will
18 discuss later in my testimony. The differences are also shown in Tables 3 and 9
19 of the Depreciation Study and summarized below by class of plant:

20

21 Steam Production: The depreciation accrual for this class of plant increased by
22 approximately \$9.7 million. Most of this increase is due to the increase in
23 interim negative net salvage.

1 Nuclear Production: This class of plant increased in depreciation accrual by
2 approximately \$23.7 million. Most of this increase is due to the increase in
3 interim negative net salvage.

4
5 Other Production (Combined Cycle): This class of plant showed an overall
6 decrease in depreciation accrual of approximately \$7.8 million. Any increases
7 caused by changing net salvage percentages were offset by the increase in
8 capital recovery dates for most of the combined cycle plants, which resulted in a
9 decrease to the accrual.

10

11 Other Production (Combustion Turbines): The depreciation accrual for this class
12 of plant increased approximately \$4.3 million. Most of this increase is due to
13 the increase in interim negative net salvage.

14

15 Transmission Plant: The depreciation accrual for this class of plant increased
16 approximately \$2.1 million dollars and was due to a combination of increased
17 service lives and increased negative net salvage.

18

19 Distribution Plant: The depreciation accrual for this class of plant decreased
20 approximately \$17 million in depreciation accrual and was due to a combination
21 of increased negative net salvage and increased lives.

22

23 General Plant: Depreciation accruals for this class of plant decreased

1 approximately \$23 million due to some changes in lives but mainly due to an
2 increase in net salvage for vehicles.

3 **Q. Please explain the annual credit to depreciation expense mentioned in the**
4 **previous response.**

5 A. Included in FPL's 2005 rate settlement agreement, FPL was provided the option
6 to record up to \$125 million annually as a credit to depreciation expense and a
7 debit to depreciation reserve. FPL has recorded a \$125 million credit in
8 depreciation expense in 2006, 2007 and 2008 and will be recording another
9 \$125 million in 2009. Therefore, by the end of 2009, FPL will have recorded
10 \$500 million associated with these credits in the depreciation reserve.

11 **Q. Has FPL taken this credit into consideration in the development of the**
12 **depreciation expense in the new Depreciation Study?**

13 A. Yes. FPL has allocated the credit to the depreciation reserve to the generating
14 units and plant accounts based on the percentage of current theoretical reserve
15 excesses to the functional total identified in FPL's current Depreciation Study.
16 The allocation of the reserve is shown in Table 10 of the Depreciation Study on
17 page III-25 of Exhibit CRC-1.

18 **Q. What is the impact of this reserve credit on the current depreciation**
19 **expense?**

20 A. The impact of decreasing the reserve would be an increase in the future
21 depreciation accruals. This is mentioned previously in describing the changes in
22 the depreciation expenses and the major cost drivers. It is impossible to identify
23 exactly the impact that this reserve credit has on each unit and each account but

1 it does account for most of the increase in generation depreciation expense.

2 **Q. What is the overall change in annual depreciation expense for 2009?**

3 A. As described before making a comparison between existing rates and proposed
4 rates using the plant at December 31, 2009, showed an overall increase in
5 depreciation expense of \$23 million. In addition, the capital recovery schedules
6 for the retirements associated with the Cape Canaveral and Riviera Plant
7 modernizations, the Automated Meter Infrastructure, and the Nuclear Uprates,
8 and their associated anticipated removal costs (shown in Schedule 7) provide an
9 additional \$78.5 million of annual depreciation.

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

11 A. Yes.

FLORIDA POWER & LIGHT COMPANY

JUNO BEACH, FLORIDA

DEPRECIATION STUDY CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO ELECTRIC PLANT AS OF DECEMBER 31, 2009

Note: Filed on March 17, 2009, due to Commission timing requirements for this study and not duplicated separately due to volume.



Harrisburg, Pennsylvania

Calgary, Alberta

Valley Forge, Pennsylvania

LIST OF CASES IN WHICH RICHARD CLARKE SUBMITTED TESTIMONY

	Year	Jurisdiction	Docket No.	Client/Utility	Subject
1.	1981	FERC	ER 81-177	Southern California Edison	Depreciation
2.	1982	FERC	ER 82-427	Southern California Edison	Depreciation
3.	1982	Ca. PUC	82-02-040	Southern California Edison	Nuclear Plant Investment
4.	1984	FERC	ER 84-075	Southern California Edison	Depreciation and Decommissioning
5.	1985	Ca. PUC	85-05-144	Southern California Edison	Nuclear Plant Investment
6.	1985	Ca. PUC	85-05-008	Southern California Edison	SONGS Nuclear Plant Recovery
7.	1986	Ca. PUC	86-12-047	Southern California Edison	Depreciation and Decommissioning
8.	1989	Ca. PUC	89-03-026	Southern California Edison	Transmission Plant Recovery
9.	1990	Ca. PUC	90-12-018	Southern California Edison	Depreciation and Rate Base
10.	1993	Ca. PUC	93-12-025	Southern California Edison	Depreciation and Rate Base
11.	1993	Ca. PUC	93-12-029	Southern California Edison	Performance Based Ratemaking
12.	1996	Ca. PUC	96-08-007	Southern California Edison	Generation Sunk Costs
13.	1997	Ca. PUC	97-10-024	Southern California Edison	1996 Capital Additions Recovery
14.	1997	Ca. PUC	97-08-056	Southern California Edison	Cost Separation
15.	1999	Ca. PUC	99-04-024	Southern California Edison	1997-98 Capital Addition Recovery
16.	2002	Ca. PUC	02-03-039	Southern California Edison	Nuclear Decommissioning Costs
17.	2002	Ca. PUC	02-05-004	Southern California Edison	Depreciation and Rate Base
18.	2005	FERC	EL00-105-007	Southern California Edison	Accounting
19.	2006	Nv. PUC	05-10003	Sierra Pacific Power Co.	Depreciation of Electric Plant
20.	2006	Nv. PUC	05-10005	Sierra Pacific Power Co.	Depreciation of Gas Plant
21.	2007	Nv. PUC	06-11023	Nevada Power Company	Depreciation of Electric Plant
22.	2008	Nv. PUC	07-09030	Southwest Gas Company	Depreciation of Gas Property
23.	2008	WUTC	072300	Puget Sound Energy	Depreciation of Electric & Gas Property