

**BEFORE THE FLORIDA
PUBLIC SERVICE COMMISSION**

**DOCKET NO. 080677-EI & NO. 090130-EI
FLORIDA POWER & LIGHT COMPANY**

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

REBUTTAL TESTIMONY & EXHIBITS OF:

C. RICHARD CLARKE

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5 **AUGUST 6, 2009**

6

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

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

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

11 A. Yes.

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

13 A. Yes. I am sponsoring the following rebuttal exhibits:

- 14 • CRC-3, Life Spans of Retired US Coal Generating Units, 10 MW or Greater
- 15 • CRC-4, Life Spans of Retired US Oil and Gas Steam Generating Units, 10
16 MW or Greater
- 17 • CRC-5, Commission Orders From State of Nevada
- 18 • CRC-6, Statistical Analysis, Bulletin 125
- 19 • CRC-7, California Standard Practice U-4
- 20 • CRC-8, NARUC, Developing an Observed Life Table
- 21 • CRC-9, Response to OPC First Set of Interrogatories No. 55

22 **Q. What is the purpose of your rebuttal testimony?**

23 A. My testimony responds to the direct testimony of Office of Public Counsel's

1 (OPC's) witness Jacob Pous relating to depreciation issues in the area of
2 remaining life calculations, production plant service lives, interim retirements,
3 interim net salvage, mass property life analysis, and mass property. Also, I am
4 responding to the testimony of Florida Industrial Power Users Group (FIPUG)
5 witness Jeffry Pollock concerning extending the lives for certain production
6 plants.

7 **Q. Please summarize your testimony.**

8 A. As discussed in greater detail in my testimony, the processes suggested by Mr.
9 Pous and Mr. Pollock lack the robustness that results from insightful
10 incorporation of company knowledge about the assets in question as well as the
11 highly respected, industry-approved methodologies that I used to arrive at the
12 recommendations within the depreciation study. All the changes suggested by
13 Mr. Pous and Mr. Pollock were biased toward increasing service lives and
14 decreasing net salvage percentages, with the readily apparent goal of decreasing
15 depreciation. My analysis of their methods indicates that, in focusing improperly
16 on this end result, they have disregarded key considerations that are considered to
17 be important industry practices. As a result, the suggested changes proposed by
18 Mr. Pous and Mr. Pollock would result in significantly understating FPL's true
19 depreciation requirements, and thus improperly skew recovery of asset value
20 toward the future, saddling future customers with a burden that is disproportionate
21 to their use of the assets in question. This has significant adverse consequences
22 for intergenerational equity and will create unnecessary risks of recovery.
23 Moreover, I will point out cases where the methodology used by Gannet Fleming

1 has found wider acceptance among the jurisdictions where it was presented than
2 the alternative recommendations of Mr. Pous and Mr. Pollock.

3
4 I would also like to add that, in addition to all of the problems with the asset lives
5 and net salvage values just discussed, Mr. Pous has calculated his proposed
6 annual depreciation expense incorrectly by failing to take into account the impact
7 resulting from his proposal to accelerate the amortization of the \$1.25 billion
8 theoretical depreciation reserve. His calculated rates do not reflect the fact that,
9 based on his proposed accelerated amortization, FPL will have to collect an
10 additional \$1.25 billion through depreciation rates in the future. Additionally, he
11 has calculated the theoretical reserve for production plant accounts incorrectly.

12
13 **SERVICE LIVES FOR PRODUCTION PLANT**

14
15 **Q. Do you agree with OPC witness Mr. Pous that the Commission should adopt**
16 **a 60-year service life for FPL's coal plants, 50-year service life for its large**
17 **gas-fired plants, and 30-35 service life for its combined cycle plants?.**

18 A. No. For the reasons discussed below, Mr. Pous' recommended service lives are
19 unrepresentatively long, in view of FPL and industry experience.

20 **Q. Do you agree with FIPUG witness Pollock that the Commission should adopt**
21 **his recommended 55-year service life for coal plants and 35-year service life**
22 **for combined cycle plants?**

23 A. No. Again, for the reasons I discussed below, Mr. Pollock's recommended

1 service lives are too long and should be rejected.

2 **Q. Please explain your participation in the development of the production lives**
3 **for the Company's generating facilities.**

4 A. For my depreciation study, the Company provided me with economic recovery
5 dates (or probable retirement dates) for all their generating stations by unit. These
6 same retirement dates were used in their 2007 Integrated Resource Plan (IRP).
7 These dates were also used in the Company's Ten Year Power Plant Site Plan
8 presented to the FPSC in early 2008.

9 **Q. Mr. Pous claims that the Company's proposed retirement dates are not**
10 **supported by the Company's Ten Year Power Plant Site Plan. Is this**
11 **correct?**

12 A. Mr. Pous is wrong. FPL's Ten Year Power Plant Site Plan fully supports the
13 retirement dates provided to me for the depreciation study. The only difference is
14 the repowering of the Cape Canaveral and Riviera Steam Plants, which the
15 Company decided to pursue after the Site Plan was developed.

16 **Q. When Gannett Fleming prepares depreciation studies for various clients, is it**
17 **common to use a company's generation Resource Plan as the starting point**
18 **to establish production plant depreciation lives?**

19 A. Yes. Gannett prepares a number of depreciation studies for many utilities in the
20 United States and Canada. In most cases, the company for which we are
21 preparing the study will have a generation plan identifying when they plan to
22 remove each unit from service. The Company will have a group of engineers and
23 managers familiar with each unit in regards to operation and maintenance of that

1 unit, and they will consider many issues before assigning a remaining life
2 including demand, load duration curves, design, energy requirements, fuel
3 supplies, temperature variations, peaks, existing lives, and age. These factors will
4 vary by company and are subject to location, operational practices, fuel resources,
5 and other conditions. Once all this information is coordinated and a resource plan
6 is developed, it is shared and approved by top company management and (if
7 applicable) presented to the relevant utilities commission. Because of these
8 reasons, it is important to depend on the knowledge of the individual Company
9 when developing retirement dates of its production plant facilities.

10 **Q. Does Gannett Fleming review the life spans resulting from these company**
11 **resource plans?**

12 A. Yes. Gannett Fleming evaluates all the retirement dates and life spans used in
13 their depreciation study. If there were significant variances from what is the norm
14 in the industry, then Gannett would question the Company and seek reasons for
15 differences. However, Gannett would rely on the information obtained from
16 management and operating personnel in reaching its conclusion.

17 **Q. During your conduct of the depreciation study for FPL, did you have**
18 **conversations with Company personnel concerning the probable lives for the**
19 **production facilities?**

20 A. Yes I did. During my FPL interviews, personnel from generation explained to me
21 some of their reasoning for the establishment of the suggested retirement dates
22 used in the study. FPL witness Hardy also describes these reasons in his rebuttal
23 testimony and discusses how engineers and planners developed probable lives

1 based on information I described in a previous response above. He also mentioned
2 other factors considered such as:

- 3
- 4 a. The coal units' economic recovery periods are based on a 40-year boiler life.
5 In the late 1990's a 30-year life was assigned to these plants on the basis of
6 damage done to boilers by burning western coal due to slag build-up. Since
7 then FPL has found ways to manage the slag problem, resulting in an
8 extension of the economic recovery period to 40 years.
- 9 b. The large gas-fired units at Martin and Manatee use a 35-year recovery period
10 as these units are heavily cycled; a longer recovery period under this level of
11 cycling would be unrealistic.
- 12 c. The 25-year economic recovery period for the combined cycle units is based
13 on manufacturer's stated projections of the physical life of the combustion
14 turbine, which is the most costly component at the combined cycle plant with
15 the shortest life. The physical life of the combustion turbine is estimated to be
16 25 years by the manufacturer based on cycling operation only, or 30 years at
17 base operations. Based on the anticipated usage the economic recovery period
18 was established at 25 years.

19 **Q. Did you review the probable retirement dates and life spans provided to you**
20 **by FPL in this depreciation study?**

21 A. Yes. I compared them to life spans used by Gannett Fleming and the industry for
22 reasonableness. The life spans the Company is recommending are within the
23 range of lives Gannett is seeing in the industry and are reasonable. The range of

1 lives within the industry for Steam Production/Coal is 40-65 years and the range
2 for Steam Production/Gas is 40-50 years. The life spans for combustion turbines
3 are in the 25-35 year range. The Company is within these ranges. As previously
4 discussed, the Company explained to me specific information used in the
5 development of their resource plan which would reasonably cause the lives to be
6 toward the low end of the ranges.

7 **Q. Did either Mr. Pous or Mr. Pollock perform any analysis of his own on each**
8 **of the Company's coal and gas fired Steam plants in question?**

9 A. No, Mr. Pous and Mr. Pollock simply relied on statistics from other industry
10 electric companies when making his recommendations. They did not consider
11 any of the unique circumstances related to the operations, design life, cycling,
12 maintenance practices, etc, of FPL's production plants.

13 **Q. Did either Mr. Pous or Mr. Pollock meet with any Company personnel to**
14 **discuss the operation and maintenance of FPL's production facilities?**

15 A. No, it is my understanding that neither Mr. Pous nor Mr. Pollock met with any
16 Company personnel before making his recommendations.

17 **Q. Did Mr. Pous or Mr. Pollock visit any of the production plants for which he**
18 **is recommending increasing the service life?**

19 A. To my knowledge, neither Mr. Pous nor Mr. Pollock visited any of FPL's
20 production plants.

1 **Q. Mr. Pous provides examples of companies that use a 60-year service life for**
2 **coal fired steam generating plants. Do those examples provide a reasonable**
3 **basis for increasing the service lives for FPL’s coal fired steam generating**
4 **plants?**

5 A. No. Mr. Pous provided examples of companies that use a 60-year service life but
6 did not reveal if any of these companies had significant investments made on their
7 units that were considered in increasing the life of their units.

8
9 While Mr. Pous states that he is aware of companies in the industry using lives for
10 coal plants in the 60-year range, I am also aware of a number of retired coal plants
11 that had lives in the 30 and 40-year range. For example: Oak Creek Units 1, 2 & 4
12 retired at 35 years; Tait Units 4 & 5 retired at 29 years; Richmond Unit 1 retired
13 at 40 years; Stateline Unit 1 & 2 retired at 48 and 39 years respectively; and
14 Riverside Unit 1 retired at 38 years.

15 **Q. Did Mr. Pous make any recommendations as to the service life for combined**
16 **cycle plants?**

17 A. No. Mr. Pous made no recommendation, however he suggested the Commission
18 order the FPL to perform a detailed analysis substantiating the 25-year life span
19 recommended by the Company.

20 **Q. Do you think this is necessary?**

21 A. No I do not. The Company has demonstrated the reasoning for their estimate of
22 25-years, and it is supported in the rebuttal testimony of FPL witness Hardy.

1 **Q. Should Mr. Pollock's recommendation of 35-years for combined cycle plants**
2 **be ignored also?**

3 A. Yes it should be ignored also, based on information presented here and in the
4 rebuttal testimony of Mr. Hardy.

5 **Q. Are you familiar with the Platts World Electric Power Plants Database?**

6 A. Yes. It is a comprehensive listing of power plants in the United States and
7 abroad, both in service and retired. The database contains information on
8 hundreds of power plants that have been retired in the United States.

9 **Q. Can you summarize the contents of the Platts database in regards to retired**
10 **coal, oil and gas power plants?**

11 A. Yes. I have analyzed the Platts database for retired coal units and retired oil and
12 gas units. As shown in exhibit CRC-3, the average age of retirements for coal
13 generating units is 42.65 years. As shown in exhibit CRC-4, the average age of
14 retirements for oil and gas generating units is 44.47 years. Given these historical
15 average ages of retirements, as well as the company specific information provided
16 by engineering, the life span estimates for FPL's generating facilities are clearly
17 reasonable.

18

19 **CALCULATION OF REMAINING LIVES**

20

21 **Q. Please describe your method for calculating remaining life depreciation**
22 **accruals.**

23 A. For the purpose of calculating remaining life depreciation accruals, I first allocate

1 the book depreciation reserve to each vintage within an account (or in the case of
2 generating units, within each account for each unit). This allocation is done in
3 proportion to the theoretical reserve for each vintage, with the limitation that the
4 reserve for each vintage cannot exceed the original cost less proposed net salvage.

5
6 Once the reserve is allocated, I can then determine the future accruals for each
7 vintage by deducting the allocated reserve from the sum of the original cost and
8 future net salvage. I then divide the resulting future accruals by the remaining life
9 for the vintage to determine the annual accrual for the vintage. The sum of the
10 annual accruals for each vintage is the annual accrual amount for the account.
11 The composite depreciation rate for the account can then be determined by
12 dividing this amount to the total original cost.

13 **Q. How do you calculate the remaining life for each vintage?**

14 A. The remaining life for each vintage is derived from the age of the vintage and the
15 specific Iowa survivor curve selected for the account.

16 **Q. Did you determine a composite remaining life for each account?**

17 A. Yes. A composite remaining life for an account can be calculated by dividing the
18 sum of the future accruals for each vintage by the sum of the annual accruals for
19 each vintage. However, unlike with Mr. Pous' proposed methodology, this
20 composite remaining life is not used for the purpose of calculating annual
21 accruals. Annual accruals are calculated for each vintage using my method.

1 **Q. On pages 42 through 47 of his testimony, Mr. Pous discusses concerns**
2 **regarding your calculation of remaining lives for plant accounts. Are those**
3 **concerns valid?**

4 A. No, they are not.

5 **Q. Please explain why the concerns are not valid.**

6 A. Mr. Pous claims that the method I used to calculate the remaining life is incorrect.
7 His main concern is that for purposes of calculating remaining life depreciation
8 accruals for an account, I prorate the book reserve for the account to each vintage.
9 In performing this proration, the total reserve allocated to each vintage is limited
10 so that it does not exceed the total vintage original cost less proposed net salvage.
11 Mr. Pous takes issue with the fact that this limitation and with the fact that the use
12 of net salvage in this calculation can have an impact on the calculation of a
13 composite remaining life for an account.

14 **Q. Has the Gannett Fleming, Inc. methodology been used in other depreciation**
15 **studies?**

16 A. Yes, Gannett Fleming has used this methodology in numerous depreciation
17 studies, and it has been accepted by many jurisdictions in both the United States
18 and Canada.

19 **Q. Has Mr. Pous challenged this method for calculating remaining lives**
20 **elsewhere?**

21 A. Yes, Mr. Pous made a similar challenge to this methodology in his testimony to
22 the Nevada Commission during the 2005 rate case for Sierra Pacific Power
23 Company (Docket No. 05-10004).

1 **Q. Did the Nevada Commission agree with Mr. Pous?**

2 A. No. The Nevada Commissioners were convinced that Gannett Fleming's
3 methodology was adequate and widely accepted in the industry as stated in the
4 Order for Dockets No. 05-10003 & 05-10004. See Exhibit CRC-5.

5 **Q. Does Mr. Pous' proposed method use the composite remaining life for an**
6 **account in determining annual depreciation accruals?**

7 A. Yes, it does. Mr. Pous recommends the use of what is referred to as the direct
8 weighting method of calculating a composite remaining life for an account. The
9 point of calculating this composite using this method is to use it to calculate
10 annual accruals for the account. As I have discussed, this is not necessary for my
11 method because accruals are calculated for each vintage.

12

13 The direct weighting method Mr. Pous proposes is described in Determination of
14 Straight-Line Remaining Life Depreciation Accruals, Standard Practice U-4,
15 published by the California Public Utilities Commission in 1961 (see Exhibit
16 CRC-7). This text also describes several other weighting methods. In discussing
17 the selection of an appropriate method, the authors state:

18 "In selecting a method of weighting, several considerations apply.
19 First, it is desired that the method of weighting used shall produce
20 the same results as though the book reserve had been prorated to
21 the various age groups or classes of property on the basis of the
22 applicable reserve requirement."

1 Rather than select a method that produces the same results as proration, I have
2 performed the proration. Based on the considerations presented in Standard
3 Practice U-4, my method is clearly preferable to that of Mr. Pous.

4 **Q. Mr. Pous claims that your approach is not consistent with standard group or**
5 **mass property depreciation concepts. Is this true?**

6 A. No, it is not. The remaining life for each vintage is determined using a survivor
7 curve consistent with standard group property depreciation concepts. A portion of
8 each vintage will be retired before the average service life and a portion will be
9 retired after the average service life. The remaining life calculated for each
10 vintage takes this into account.

11 **Q. Mr. Pous claims that your method does not calculate accruals for vintages**
12 **that are fully accrued is improper because it is inconsistent with FPL's actual**
13 **practice. Is this concern valid?**

14 A. No, it is not. By limiting the accruals only to vintages that are not fully accrued,
15 annual accruals are calculated only for those vintages that have future costs left to
16 recover. As a result, the composite annual depreciation rate developed is
17 appropriate for the plant balances going forward and results in the necessary
18 amount of accruals.

19 **Q. Mr. Pous' Exhibit JP-3 provides an example of what he calls "Gannett**
20 **Fleming's remaining life calculation error." He proposes an alternate**
21 **method of allocating the book reserve to each vintage. Is his method more**
22 **reasonable than your method?**

23 A. No. The difference in allocation that Mr. Pous shows in Exhibit JP-3 is that Mr.

1 Pous allocates amounts to vintages that exceed the original cost less future net
2 salvage. His example is not more compelling than my method, as his method
3 results in negative accruals for some vintages.

4 **Q. Mr. Pous claims that your methodology of allocating the book reserve to each**
5 **vintage impacts the calculation of the theoretical reserve. Is Mr. Pous**
6 **correct in making this claim?**

7 A. No, he is not. In my methodology, the theoretical reserve is used to allocate the
8 book reserve to each vintage. In other words, calculating the theoretical reserve is
9 a first step in calculating annual accruals. Thus, it is clear that the theoretical
10 reserve is calculated independent of my method of calculating annual depreciation
11 accruals and calculating a composite remaining life. Changing the method used
12 to calculate accruals would not impact my calculation of the theoretical reserve.

13

14 **INTERIM SURVIVOR CURVES FOR PRODUCTION PLANT**

15

16 **Q. Please explain the method you proposed for depreciation of production plant**
17 **accounts.**

18 A. In the Depreciation Study submitted as Exhibit CRC-1, I have proposed to use the
19 life span technique for each of the company's generating units. The life span
20 technique is appropriate for accounts in which large groups of property will be
21 retired at once. Power plants are a perfect example of this type of property, as all
22 of the assets associated with a generating unit - such as structures, turbines,

1 generators and other electrical equipment - will be retired when the unit is taken
2 out of service.

3

4 Life span property experiences two types of retirements – final retirements and
5 interim retirements. Final retirements are those that occur when the entire unit is
6 taken out of service. Interim retirements, on the other hand, are retirements of
7 components that occur before the final retirement date for the entire unit.

8

9 To properly calculate the depreciation for each generating unit, one must estimate
10 both the date of final retirement and the level of interim retirements that will
11 occur before that date.

12 **Q. Does Mr. Pous agree with using the life span method for production plants?**

13 A. Yes, he does. But while he agrees that depreciation for generating units should
14 account for interim retirements, he proposes a different method for doing so.

15 **Q. Please explain the difference between your proposed method for accounting
16 for interim retirements and the method proposed by Mr. Pous.**

17 A. In my depreciation study, I have utilized the proposed retirement date for each
18 generating unit proposed by the Company. In addition, I have estimated an Iowa
19 type survivor curve for each production plant account that takes in to account the
20 fact that some of the property at these plants will be retired before the final date of
21 retirement. Mr. Pous also proposes using the life span technique and adjusting for
22 interim retirements. However, instead of using an Iowa curve with a distinct
23 retirement dispersion pattern that matches the type of property in each plant

1 account, he instead estimates an “interim retirement rate” and adjusts the
2 remaining life for each generating unit within each plant account based on this
3 interim retirement rate. By selecting an interim retirement rate for each account,
4 he assumes that there will be a constant level of interim retirements for each year
5 the plant is in service.

6 **Q. How is this method different from using an interim survivor curve?**

7 A. Actually, although he claims there to be a difference, Mr. Pous employs the same
8 basic method as I do except that he selects the same type of curve for every
9 account. Using a constant interim retirement rate to adjust for interim retirements
10 for each production plant account, as Mr. Pous proposes, is identical to selecting
11 an O1 type survivor curve as an interim survivor curve for each and every
12 account. An O1 curve is a straight line with a constant level of retirements at
13 each age, and as a result, the calculation can be simplified to be dependent only
14 on the remaining life of a generating unit. If a survivor curve with a variable
15 retirement dispersion is used, such as the Iowa R, L and S type curves that the
16 company has proposed, the calculation is more appropriately differentiated
17 because each vintage needs to be calculated separately.

18 **Q. On pages 59 through 65 of his testimony, Mr. Pous discusses concerns with**
19 **your method of accounting for interim retirements for FPL’s generating**
20 **units. Are these concerns valid?**

21 A. No, they are not.

1 **Q. On page 60 of his testimony, Mr. Pous claims that your method of accounting**
2 **for interim retirements is “inappropriate and cumbersome for application in**
3 **this proceeding.” Is this an accurate assessment?**

4 A. No, it is not. As I will discuss, my proposal to use Iowa survivor curves is
5 appropriate and widely accepted for life span property such as generating units.
6 Additionally, while my calculation requires more detail than that of Mr. Pous, the
7 increased accuracy in predicting future interim retirements far outweighs any
8 additional effort required in its calculation.

9 **Q. Has your methodology been used in other depreciation studies?**

10 A. Yes. My company uses this method for life span property in all of our studies for
11 this type of asset class. We have used it in many jurisdictions across the United
12 States and Canada.

13
14 Our method is also recognized by NARUC in its publication “Public Utility
15 Depreciation Practices” (see Exhibit CRC-8). According to NARUC, developing
16 an observed life table from historical data, which “can be fitted to generalized life
17 curves, e.g., Iowa curves or curves based on the Gompertz-Makeham formula,”
18 and using the fitted curve to account for interim retirements is appropriate for life
19 span property. This is precisely the method I have employed.

20 **Q. Do any other Florida utilities use the Company’s method for accounting for**
21 **interim retirements?**

22 A. Yes. Progress Energy Florida used Iowa survivor curves for interim retirements
23 in its 2005 Depreciation Study (filed in Docket 050078-EI). The Commission

1 approved this method in their depreciation study. For their 2009 Depreciation
2 Study, they have again used the same methodology (Docket 090079-EI).

3 **Q. Mr. Pous filed testimony in Docket 050078-EI. Did he challenge Gannett's**
4 **method for accounting for interim retirements in the Progress Energy**
5 **Florida Depreciation Study?**

6 A. No, he did not.

7 **Q. Has this method for accounting for interim retirements been challenged in**
8 **any previous rate cases?**

9 A. Yes, Mr. Pous made a similar challenge to this methodology in Nevada, in
10 testimony for the aforementioned rate proceeding of Sierra Pacific Power
11 Company (Docket No. 05-10004).

12 **Q. What was the decision reached by the Commission in the Sierra Pacific case?**

13 A. As previously stated, the Commission agreed with Gannett Fleming in this case
14 and specifically agreed with Gannett's industry-established method of calculating
15 interim retirements in its Order for Dockets No. 05-10003 & 05-10004.

16 **Q. On page 60 of his testimony, Mr. Pous states that the method you used is**
17 **"cumbersome for application in this proceeding." Do you agree with his**
18 **characterization?**

19 A. No, I do not. While the method I proposed in the depreciation study requires
20 calculations that are more complicated than those required with Mr. Pous'
21 proposal, they are not difficult calculations to make with modern computer
22 technology. As I will discuss, my proposals are a more accurate estimate of

1 future interim retirements. It would be inappropriate to sacrifice this accuracy for
2 the sake of simplifying the calculation of depreciation.

3

4 It is also important to point out that my methodology is simpler than that
5 employed and approved in FPL's last rate case Docket No. 050045-EI, in which
6 depreciation was calculated for every distinct type of property unit within each
7 plant account and generating unit.

8 **Q. Mr. Pous claims that because the property in production plant accounts is**
9 **not homogeneous, using an interim survivor curve to estimate interim**
10 **retirements is inappropriate. Is this concern valid?**

11 A. No, Mr. Pous is incorrect. Property in these accounts is grouped according to the
12 Uniform System of Accounts, just as property for transmission, distribution and
13 general plant is. Mr. Pous has proposed Iowa survivor curves for plant accounts
14 in these functions, despite the fact that some Transmission and Distribution plant
15 accounts, such as Account 362, Station Equipment, also do not include
16 homogenous-type investments.

17

18 The retirement dispersion pattern for each of the Iowa survivor curves takes into
19 account the fact that property in a given plant account will be retired at different
20 ages. As a result, it is perfectly reasonable to use an Iowa survivor curve to
21 estimate interim retirements for the property in production plant accounts. Given
22 that the estimated retirement patterns are based in part on the company's actual
23 retirement experience, the estimates based on Iowa survivor curves are superior to

1 the estimates proposed by Mr. Pous, which assume a constant level of retirements
2 each year.

3 **Q. Could you provide an example to illustrate the difference between Mr. Pous'**
4 **proposal and the company's proposal?**

5 A. Yes. The difference is perhaps best illustrated by elaborating on the example of a
6 life span group of property given by Mr. Pous in his testimony. In his testimony,
7 Mr. Pous draws an analogy to using the life span technique for power plants to
8 that of thinking of a car as life span property. As Mr. Pous explains, while a
9 typical car might have a service life of 10 years, during the life of the car various
10 components will have to be replaced. Thus, although the car itself will have a life
11 span of 10 years, the actual average service life of the car will be shorter once you
12 take into account the additional retirements due to the replacing each of the
13 components.

14 **Q. In this example, how would Mr. Pous' estimate the interim retirements a car**
15 **would experience?**

16 A. Using Mr. Pous' method of adjusting for interim retirements, one would estimate
17 the percentage of the car's cost that would be retired each year and adjust the
18 average service life based on this estimate.

19 **Q. Does this method accurately estimate interim activity?**

20 A. No, not on a consistent basis. Continuing with the same example we can see that
21 based on any one car owner's actual experience, this method does not accurately
22 estimate actual interim retirements. The problem is that Mr. Pous assumes that
23 retirements will occur at a constant level throughout the life of the car. This is not

1 a true reflection of how car repairs are spread out over the life of a car. Instead,
2 there will likely be few retirements in the early years of the car's life, but as its
3 components age, the level of retirements will increase. So, while in the first few
4 years only minor items will need to be replaced, as the car gets older the owner
5 will have to replace the tires, the brakes and possibly even major items such as the
6 transmission. These items are all more expensive, so it is clear that retirements
7 will increase in the later stages of the life of the car.

8 **Q. Does Mr. Pous' proposal account for the fact that interim retirements tend to**
9 **increase as property gets older?**

10 A. No.

11 **Q. Does the company's proposed method take into account this sort of**
12 **retirement dispersion?**

13 A. Yes, it does. Instead of assuming a constant level of interim retirements, one
14 should instead use the Company's method and estimate these interim retirements
15 with a survivor curve that better mirrors actual interim retirement experience.

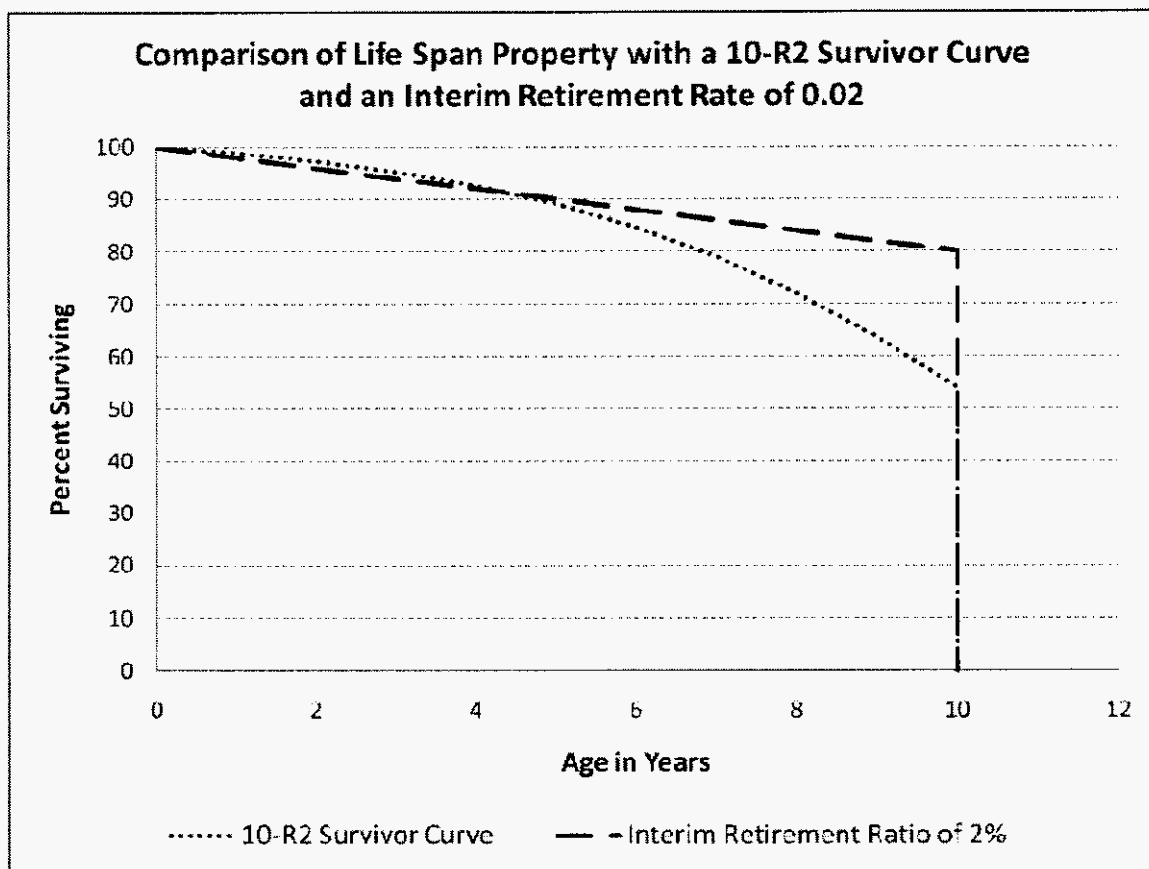
16 **Q. Continuing with the example of a car, could you elaborate on the difference**
17 **between the two methods?**

18 A. Figure 1 graphically shows the results of using these two methods. The dashed
19 line illustrates Mr. Pous' method assuming an interim retirement rate of 0.02,
20 which means that 2% of the original cost of the car will be retired each year. The
21 dotted line illustrates the company's method using a 10-R2 survivor curve. As the
22 graphs illustrate, Mr. Pous' method results in a constant level of retirements for
23 each year until the final retirement at age 10. As discussed earlier, this is not an

1 accurate estimate of actual replacement expenditures throughout the life of the
2 car. Instead, the 10-R2 curve is a better reflection of actual interim retirements.
3 There are very few retirements in the early years but retirements increase as more
4 expensive parts need to be replaced.

5

6 **Figure 1**



7

8 The average service life for each estimate is the area under the curve. As
9 expected, in each case the average service life is less than ten years. However,
10 both methods lead to different results. The average service life using Mr. Pous'
11 method is 9 years, but using the company's method and a 10-R2 survivor curve
12 results in an average service life of 8.5 years.

1 **Q. How does Mr. Pous select the interim retirement rate to use?**

2 A. Although his presentation in Exhibit JP-4 makes it appear as if Mr. Pous has
3 considered a number of historical data points, in reality his calculation of an
4 interim retirement rate is really only based on a single observed data point. For
5 each type of plant he selects a single data point near the end of the observed life
6 table, and calculates what percentage of investment would need to be retired each
7 year to result in the percent surviving indicated by this data point. This is
8 equivalent to fitting a straight line on a graph through two points – one at age 0
9 with 100% surviving, and one at a later age with a lesser percent surviving.

10 **Q. Are there any problems that arise with Mr. Pous' method of determining an**
11 **interim retirement ratio?**

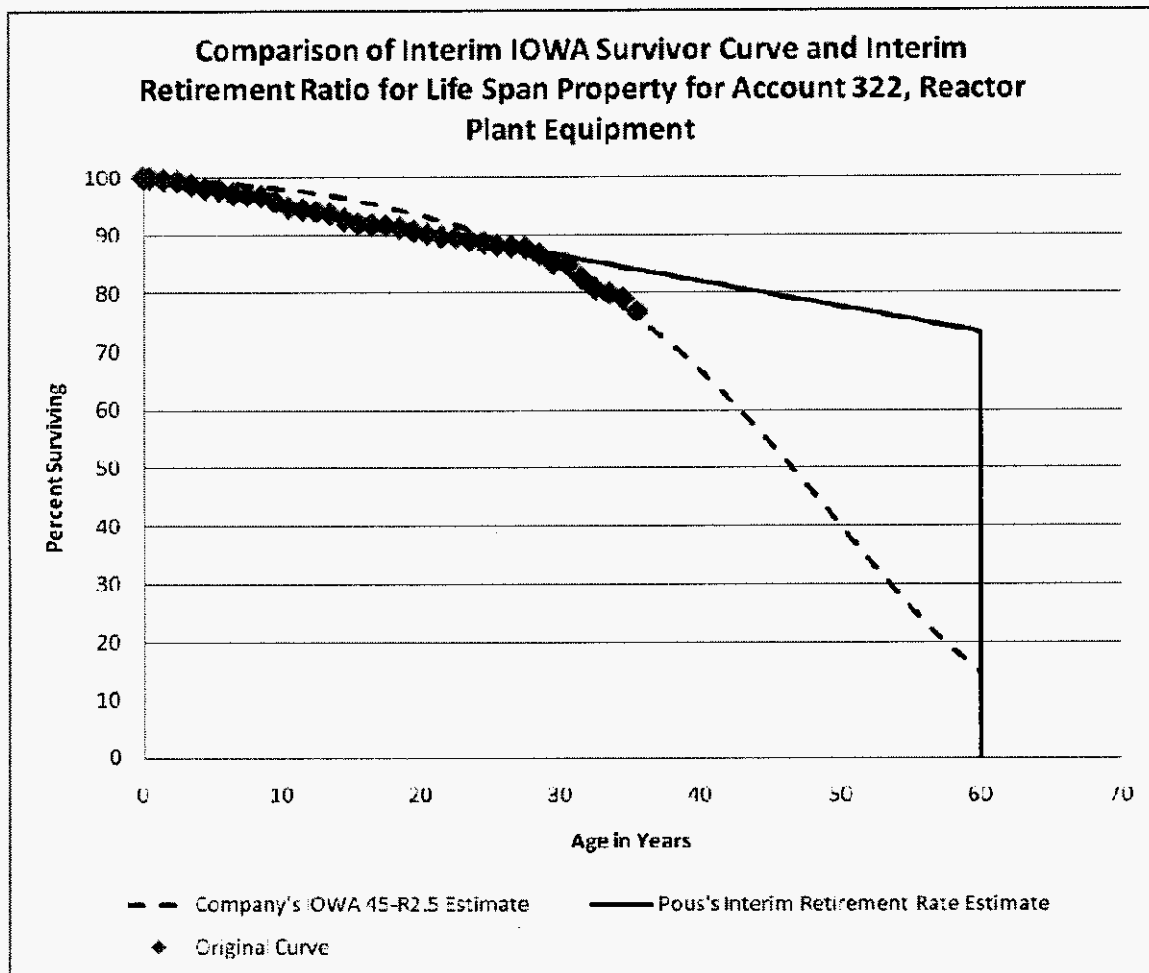
12 A. Yes, there are. For example, in Figure 1 both the 10-R2 survivor curve and the
13 curve derived from using an interim retirement rate of 0.02 are close
14 approximations of each other through about age 5. However, they deviate
15 significantly after this age. Yet if one tries to determine an interim retirement rate
16 using only this data point, the results will significantly underestimate future
17 retirements. This is akin to making assumption that just because you have not
18 needed to spend a lot of money on car repairs in the first five years you have
19 owned it, that you will never have to make significant repairs to keep the car
20 running in the future.

21 **Q. Does Mr. Pous make a similar assumption in his determination of interim**
22 **retirement rates in his testimony?**

23 A. Yes, he makes this precise assumption in many of his estimates of interim

1 retirement ratios. As an example, Figure 2 shows the actual experienced survivor
2 curve from FPL's history (or "original curve"), my proposed interim survivor
3 curve estimate of 45-R2.5, and the curve implied by Mr. Pous' proposed interim
4 retirement rate of .0044 for Account 322, Reactor Plant Equipment.

5 **Figure 2**



6
7 Mr. Pous' Exhibit JP-4 shows his calculation of interim retirement rates. He
8 claims to have used 50 data points for all steam generating accounts, 30 data
9 points for all nuclear generating accounts and 15 data points for all other
10 production generating accounts.

1 For this nuclear account example, he also provides a percent surviving of 86.79%.
2 This percent surviving corresponds to the percent surviving at age 28.5, as shown
3 in the Original Life Table for Account 322 in Exhibit CRC-1, page 407. He then
4 calculates his interim retirement rate of .0075 to be $(1-.8679)/30$.

5
6 I should first point out that Mr. Pous' calculation is incorrect. If 86.79% is
7 surviving at age 28.5, then $(1-.8679)$ should be divided by 28.5 instead of by 30.
8 If Mr. Pous had calculated a constant retirement rate correctly, he would have
9 ended up with a rate of .0046 instead of .0044. More importantly, as was the case
10 with the car example, this method has the potential to significantly underestimate
11 future retirements. Mr. Pous' method assumes that the rate of retirements will be
12 the same in the future as it was in the past.

13
14 Additionally, Mr. Pous ignores later data points that have experienced higher
15 levels of retirements. As you can see, while both my estimate and Mr. Pous'
16 estimate are similar through age 28.5, after this point they begin to deviate. My
17 estimate is a much better fit for these later data points.

18 **Q. Based on the original life table for this account, the exposures for these data**
19 **points are smaller than for earlier data points. According to Mr. Pous'**
20 **testimony, this means that they are not as important to consider when fitting**
21 **a survivor curve. Is he correct in this assertion?**

22 A. No, he is not. As I will address later in my testimony, when determining which
23 data points are significant for the purpose of curve fitting, the fact that one data

1 point has larger exposures than another does not necessarily imply that it should
2 have more weight in determining a proper survivor curve estimate. What is more
3 important is that the total exposures are statistically significant. In this case there
4 are still exposures in excess of \$190 million for the data points at ages 29.5 and
5 30.5. For the data points through age 34.5, exposures still exceed \$26 million.
6 Thus, the data points that Mr. Pous has chosen to ignore still have a significant
7 amount of investment.

8 **Q. Does your estimate take all of the significant data points into account?**

9 A. Yes. As you can see in Figure 2, my estimate is a good fit though the data point
10 that Mr. Pous has chosen to emphasize, and is an excellent fit after that.

11 **Q. Does your estimate take any other factors into account?**

12 A. Yes, it does. In determining the interim survivor curve estimates used in the
13 depreciation study, I have relied on a number of factors. These included all of the
14 company's historical data, discussions with company management, field visits to
15 FPL generating sites, a comparison with industry data and trends, and previous
16 Commission decisions.

17 **Q. Are there any additional problems with Mr. Pous' method for determining
18 an interim retirement rate?**

19 A. Yes, there are. Another problem with Mr. Pous' analysis is that he assumes that
20 future interim retirement activity will be the same as past retirement history. In
21 the case of nuclear plants, it is unlikely that a plant designed for 40 years of
22 commercial operation, as is the case with both of FPL's nuclear sites, will not
23 experience an increase in interim retirements as the life is extended to 60 years.

1 Yet Mr. Pous' interim retirement rate estimate assumes that retirements in the
2 final 31.5 years of operation will be the same as in the first 28.5 years of
3 operation.

4 **Q. For Steam Plant accounts Mr. Pous has selected a data point at age 48.5**
5 **years to calculate his interim retirement rate. Because there is a longer**
6 **history for Steam Plant accounts, is Mr. Pous' proposal for Steam**
7 **Production Plant a better estimate of future interim retirements?**

8 A. No, this is not the case. Even for accounts for which there is longer retirement
9 history, it is incorrect to simply assume that the past will be indicative of the
10 future. For example, cap and trade legislation could have a significant impact on
11 steam generating plants. In order to keep such plants operating in the future, the
12 company will likely require large investments in new technologies and associated
13 retirements to meet future regulatory requirements. In this case, past interim
14 retirement history would not necessarily be indicative of future interim
15 retirements.

16

17

INTERIM NET SALVAGE

18

19 **Q. What does Mr. Pous assert concerning your analysis of interim net salvage?**

20 A. Mr. Pous has proposed two types of adjustments to my estimates for interim net
21 salvage. First, he has changed the adjustment for interim retirements based on his
22 proposed interim retirement ratios. This has affected every account, and is
23 dependent entirely on the estimate of interim retirements as described in the

1 previous section. I will address this issue in general; an account-by-account
2 discussion is not necessary.

3

4 Second, he has specifically challenged my estimates for two Steam Production
5 accounts, two Nuclear Production accounts and five Other Production accounts. I
6 will address some of his criticisms for these accounts in general. I will also
7 address the specifics of each of these accounts in detail.

8 **Q. Is this criticism valid?**

9 A. No, as I will explain below.

10 **Q. What is interim net salvage?**

11 A. As I have discussed in previously, for life span property such as power plants
12 there are two types of retirements. Final retirements are those that occur when a
13 generating unit is taken out of service; at this point all the property of that unit
14 will be retired. Interim retirements are those that occur due to the normal
15 operation of the generating unit, and are made prior to the final retirement date.

16

17 Both types of retirements can have gross salvage and cost of removal associated
18 with them. In the state of Florida, net salvage related to final retirements is
19 accrued through a separate dismantlement and decommissioning reserve. As a
20 result, there is no need to make an estimate for it in the Depreciation Study.

21

22 For interim retirements, however, the estimated net salvage must be recovered
23 from ratepayers over the lives of the assets, just as is the case with mass property

1 accounts such as those in Transmission and Distribution Plant. The future amount
2 of interim net salvage can be estimated in a similar manner to mass property net
3 salvage, and a net salvage percent can be developed for each plant account using a
4 combination of historical data and informed judgment. The only difference is that
5 interim net salvage does not pertain to all of the property for the generating unit.
6 Instead, it is related to only those that will be retired as interim retirements. As a
7 result, this “unadjusted” net salvage percent needs to be adjusted so that it
8 recovers an amount that pertains only to interim retirements.

9 **Q. How is this adjustment made?**

10 A. In the depreciation study, the unadjusted net salvage percent developed in my
11 analysis is reduced based on the percentage of plant that will be retired as interim
12 retirements. This percentage can be determined from the survivor curve for each
13 production plant account. So, for example, if we have estimated that a generating
14 unit will last 50 years and the interim survivor curve for our plant account is the
15 40-R2, this means that roughly 73% of the original investment will have been
16 retired at age 50. Thus, we can adjust our net salvage estimate so that it only
17 pertains to 73% of the plant. With rounding, a (10)% net salvage estimate
18 becomes (7)%, or a (20)% net salvage estimate becomes (15)%. Please note that I
19 will be using parentheses to describe negative numbers throughout my testimony.

20 **Q. Has Mr. Pous made an adjustment?**

21 A. Yes, he has. He has adjusted the net salvage estimates based on his interim
22 retirement rates in a similar manner. However, even for accounts where he agrees

1 with my net salvage analysis, the proposed net salvage percents are different from
2 mine because there is a different adjustment for net salvage.

3 **Q. Could you discuss Mr. Pous' specific proposals for changes to your net**
4 **salvage estimates?**

5 A. Yes. I will only discuss in detail those accounts that Mr. Pous has criticized
6 directly. For those accounts that he proposes a change based solely on a change
7 in the interim survivor curve estimates, Mr. Pous' changes are inappropriate
8 because his methodology and estimates for accounting for interim retirements are
9 inadequate, as I have discussed previously.

10 **Q. Are there any general criticisms of your unadjusted estimates that Mr. Pous**
11 **makes that you would like to address?**

12 A. Yes, for a number of accounts Mr. Pous notes that the mix of investment for plant
13 currently in service is different from the mix of investment reflected as
14 retirements in the historical database we relied on for our net salvage analysis. He
15 argues that as a result the historical database is not reflective of future interim net
16 salvage.

17

18 He is incorrect in this assertion. Our net salvage estimates for production plant
19 accounts are estimates of net salvage for *interim* retirements. Not all of the plant
20 in service will be retired as interim retirements; instead, a large amount will be
21 final retirements when an entire generating unit is taken out of service. As such,
22 the mix of investment for interim retirements will necessarily be different than
23 that of the entire plant in service for each account. Thus, what is important is that

1 the plant retired as reflected in FPL's historical database is representative of the
2 type of property that will be retired in the future as interim retirements. In the
3 vast majority of cases where Mr. Pous attempts to make this argument, past
4 interim retirements are indicative of future interim retirements. Where this is not
5 the case, I have placed less weight on these retirements in my analysis.

6

7 Another argument Mr. Pous makes for a number of accounts is that removal costs
8 that occur as a result of the replacement of property for conversion to combined
9 cycle facilities have been recorded incorrectly. He claims that these costs should
10 have been applied to the new asset instead of to cost of removal. As I will discuss
11 later in my testimony, in the section "Mass Property Net Salvage," this argument
12 is based on a flawed interpretation of the Uniform System of Accounts and should
13 be rejected.

14 **Q. Please discuss Account 311 Structures and Improvements.**

15 A. For this account I selected a net salvage estimate of (15)%, which I have reduced
16 to (5)% to account only for interim retirements. To put these figures in context,
17 the historical average is (16)% and the current approved estimate is (9)%.

18 **Q. Mr. Pous claims that it is appropriate to place more weight on recent history
19 for this account. Do you agree?**

20 A. No, I do not. There is a diverse collection of assets in this account, and different
21 types of assets have different levels of net salvage. Focusing on a narrow band of
22 experience has the potential to omit relevant data. For this reason, the overall
23 band of experience is more important in terms of forecasting future net salvage.

1 **Q. Mr. Pous claims that compared to the plant balance for this account, a**
2 **disproportionate share of the historical retirements have been piping, and as**
3 **a result this has skewed the historical data. Is this a valid claim?**

4 A. No, it is not. This is an example of Mr. Pous incorrect claim that the mix of
5 investment in the retirement history should be the same as the mix of investment
6 for plant in service. As I have discussed, what is actually important is whether the
7 mix of retirements reflects future interim retirements. In this case, these
8 retirements are indicative of interim retirements that will occur in the future and
9 Mr. Pous' assertion that they should be given less weight is incorrect.

10 **Q. Mr. Pous claims that the retirement of a retaining wall and a cooling pond**
11 **underdrain system in 2007 have skewed the data. Is he correct?**

12 A. No, these items do not skew the data. Despite what Mr. Pous claims, it is
13 certainly possible that these types of retirements will be made in the future.

14

15 However, these retirements are more than offset by a large reuse salvage amount
16 of \$1,443,521 in 1986. Because reuse salvage is \$0 for every other year, I have
17 elected to give this entry less weight. As a result, the data still supports an
18 estimate of (15)%..

19 **Q. Please discuss Account 314 Turbogenerator Units.**

20 A. For this account I have selected a zero net salvage percent. There have been years
21 with high positive net salvage and high negative net salvage, however there is no
22 clear pattern to the data.

1 Mr. Pous proposes a net salvage estimate of 10%. He claims that when major
2 items of property are retired, such as rotors or stators, there is positive net salvage,
3 but when minor items are retired there is negative net salvage. He claims that this
4 is the cause of the volatility in levels on net salvage from year to year, and bases
5 his recommendation on the overall net salvage average of 8% and the five-year
6 average of 9%.

7
8 I agree with Mr. Pous that major items of property will be retired as interim
9 retirements in the future, and that in this particular account these retirements can
10 result in positive net salvage. However, a more detailed look at the underlying
11 data reveals large levels of gross salvage in the past are not likely to be indicative
12 of future levels of gross salvage. In particular, retirements in 1992 and 2003
13 account for gross salvage of \$6,739,654 and \$7,882,154 respectively. Combined,
14 this represents over 45% of the total gross salvage in the full twenty-two year
15 history. The 1992 gross salvage is related to warranty replacements at Martin
16 Unit 1 and Manatee Unit 1. The 2003 gross salvage was related to insurance
17 proceeds for a failed generator at Martin Unit 1. In both cases, the retirements
18 that resulted in these large gross salvage entries are not representative of
19 expectations for future interim retirements, and as a result should be given less
20 weight in the analysis.

21
22 If these retirements are excluded from the analysis, the resulting historical average
23 indicates negative levels of net salvage for both the overall band of experience

1 and for the most recent five years. As a result, my estimate of zero is clearly
2 justified by a detailed analysis of the historical data.

3 **Q. Please discuss Account 322 Reactor Plant Equipment.**

4 A. For this account I have proposed a (5)% estimate, reduced to (4)% to be
5 applicable to interim retirements. The overall average is (11)%, and the five-year
6 average is (30)%. Cost of removal has also increased in the past four years.

7

8 Mr. Pous proposes to retain the (2)% net salvage estimate. He claims that the
9 2005 cost of removal distorts the data and as a result there is no reason to increase
10 the estimate. The 2005 entry is somewhat atypical, and as a result I have given it
11 less weight in my analysis. However, even without this entry a (5)% rate is
12 justified. The overall average is (11)%, which is much higher than my estimate.
13 Other than 2005, recent years have experienced higher net salvage as well. For
14 example, 2004 had an overall average net salvage of (11)% and 2006 had (18)%.
15 Further, the overall average is also skewed by a very high reuse salvage entry in
16 1995. Without this entry the overall average would have been even higher. As a
17 result, my unadjusted estimate of (5)% is appropriate for this account.

18 **Q. Please discuss Account 324 Accessory Electrical Equipment.**

19 A. For this account, I have recommended an unadjusted (20)% net salvage estimate
20 which becomes (12)% estimate after adjusting for interim retirements. The
21 overall average for net salvage for this account is (19)% and the most recent five-
22 year average is (41)%.

1 Mr. Pous proposes to keep the (2)% estimate, which he adjusts to (.06)% based on
2 his interim retirement rate. Mr. Pous' argument is based on the fact that the total
3 number of retirements is small compared to the total plant balance. As have
4 discussed previously, the total plant balance is irrelevant; we are only concerned
5 with interim retirements. As a result, the historical data is appropriate for
6 determining an interim net salvage rate, and the unadjusted estimate of (20)% that
7 I have recommended is justified for this account.

8 **Q. Please discuss Account 341 Structures and Improvements.**

9 A. For this account I have recommended an unadjusted net salvage estimate of
10 (25)%. The overall average is (20)%, and is skewed by large gross salvage
11 amount of \$1,512,327 in 2007. Without this amount, net salvage would be nearly
12 twice as negative.

13
14 Mr. Pous proposes a net salvage estimate of zero, which is inexplicable given that
15 other than in 2007, there has been either zero or negative net salvage in every year
16 the Company has experienced retirements. His proposal rests on three main
17 arguments, none of which have any validity. First, he claims that I "chose to
18 ignore a significant positive level of net salvage that occurred in 2007 without any
19 investigation." This is simply untrue. I have not ignored this gross salvage
20 amount, although because it is an anomaly I have given it less weight than the rest
21 of the database. Again, if this entry were ignored completely, the overall average
22 net salvage would be close to (40)%. I have not selected a (40)% net salvage;
23 instead, I have chosen a (25)% rate in part because of the 2007 year.

1 I have addressed Mr. Pous' other two arguments previously. First, he argues that
2 recent removal costs related to the conversion of a facility to a combined cycle
3 plant should have instead been assigned to the cost of the new additions. As I
4 have discussed, his reasoning is flawed and should be rejected. Second, he claims
5 that recent retirements are not reflective of the overall mix of investment in the
6 account. As I have discussed, it is only important that past retirements reflect
7 future interim retirements. In this case, they do.

8 **Q. Please discuss Account 342 Fuel Holders, Producers and Accessories.**

9 A. For this account I have proposed an unadjusted net salvage estimate of (5)%. The
10 overall average is (4)% and the most recent five-year band is (19)%.

11

12 Mr. Pous proposes a net salvage estimate of zero. His proposal is based on his
13 argument that the mix of investment for retirements is not reflective of the mix of
14 investment for the entire account. As I have discussed, this argument is flawed.
15 Past retirements are indicative of the types of property that will be retired as
16 interim retirements in the future, and as a result the estimate I have made based on
17 the historical data is appropriate.

18 **Q. Please discuss Account 343, Prime Movers – General.**

19 A. For this account I have recommended a (10)% unadjusted net salvage estimate.
20 The overall average for this account is (24)% and the most recent five-year
21 average is (14)%.

22

23 Mr. Pous proposes an estimate of zero. He first argues that removal costs

1 associated with conversion to combined cycle facilities should have been charged
2 to new additions. As I have discussed this argument is flawed.

3

4 Additionally, Mr. Pous notes two large negative gross salvage amounts However,
5 even ignoring these amounts there is a clear history of removal costs associated
6 with retirements in this account. As a result, Mr. Pous' proposal of zero is not
7 reflective of the company's historical data.

8 **Q. Please discuss Account 344, Generators.**

9 A. For this account I have recommended a net salvage estimate of (100)%. The
10 overall average is (98)% and the most recent five-year average is (136)%

11

12 Mr. Pous recommends a net salvage estimate of zero. His estimate is based on
13 three main arguments. First, he makes his unwarranted claim that the data cannot
14 be relied on because it includes conversions to combined cycle facilities. Second,
15 he repeats his flawed argument that the mix of investment for retirements needs to
16 be similar to the mix of investment for the current plant balance. Finally, he
17 makes the claim that "the scrap or resale value of investment in this account is
18 likely to increase" yet offers absolutely no evidence to support this claim.

19

20 Given that Mr. Pous offers no legitimate reason to deviate from the Company's
21 actual historical experience, my estimate is appropriate for this account.

1 **Q. Please discuss Account 345, Accessory Electric Equipment.**

2 A. For this account I have proposed a net salvage estimate of (10)%. The overall
3 experience is (7)% and the most recent five-year band is (14)%.

4

5 Mr. Pous recommends a net salvage estimate of zero. Mr. Pous' argument is
6 based on his flawed argument that the mix of investment for retirements must be
7 similar to the mix of investment for the current plant balance. In this case he is
8 again incorrect, as retirements reflect the types of property that will likely be
9 retired as interim retirements in the future.

10

11 As a result, Mr. Pous' estimate of zero is clearly inappropriate given the levels of
12 negative net salvage the company has experienced. My estimate of (10)% is an
13 appropriate reflection of the overall retirement history and the more recent trend
14 towards more negative net salvage.

15

16 **MASS PROPERTY AVERAGE SERVICE LIVES**

17

18 **Q. What does Mr. Pous assert about your analysis of average service lives?**

19 A. Mr. Pous reviewed the statistical analysis that I performed and made selections of
20 average service lives that were biased towards longer lives. By relying on
21 different sections of the data he was able to skew the results so that they appear to
22 support his selections.

1 **Q. Is his criticism valid?**

2 A. No, as I will explain below.

3 **Q. What were the results of his analysis?**

4 A. Mr. Pous claims he reviewed all accounts in mass property for transmission,
5 distribution and general plant and made adjustments to 18 of the 36 accounts. Of
6 the 18 accounts he made adjustments to, all were biased towards longer lives.

7 **Q. Do you agree with his methodology?**

8 A. No I do not.

9 **Q. Could you briefly explain how a statistical life analysis is performed?**

10 A. Yes, my direct testimony explains in detail with examples of how a statistical
11 analysis of Company data is performed using the Retirement Rate Method.
12 Exposures and retirements are reviewed by account by age. From this
13 information, a survivor ratio is developed and ultimately a survivor curve. These
14 survivor curves are then compared to the Iowa Curves, which were developed in
15 the industry through an extensive process of observation and classification of the
16 ages at which industrial property retires. These Iowa Curves are used and
17 accepted throughout the industry. The Iowa curves, their development, and their
18 use are further explained in my direct testimony.

19 **Q. How is this curve fitting performed?**

20 A. Curve fitting and selection of survivor curves is described in detail in “The
21 Estimation of Depreciation” by Fitch, Wolf and Bissinger. As described in that
22 publication curve fitting is done by a combination of two methods, graphically
23 matching and mathematical matching.

1 **Q. How does Gannett Fleming, use the above mentioned methodology?**

2 A. Gannett Fleming, Inc. uses a combination of visual curve fitting and mathematical
3 matching to develop the “best” fitting curve.

4 **Q. Does Mr. Pous use the same method?**

5 A. No. he does not. It appears Mr. Pous simply uses a visual curve fitting with no
6 statistical analysis to determine if his curve is really the “best” fit overall. He
7 relies mainly on the earlier retirements of an account to make his final curve
8 selection.

9 **Q. Please explain how you determined your proposed curves and lives for the**
10 **mass property accounts.**

11 A. The process included a number of steps:

- 12 1. The process began with FPL data, which was reviewed with FPL personnel
13 for any irregularities.
- 14 2. I then performed statistical analysis known as the Annual Rate Method on all
15 accounts, this methodology is described in my direct testimony including
16 visual and mathematical curve fitting.
- 17 3. I incorporated information from FPL interviews with O&M personnel.
- 18 4. I incorporated any information gathered on our field visits.
- 19 5. I reviewed the current approved average service lives and curves.
- 20 6. I compared initial results with industry statistics.
- 21 7. I then made my final selections.

22 **Q. What were the results of your analysis?**

23 A. Out of the 36 mass property accounts I increased the lives in 22 accounts,

1 decreased the lives in 4 accounts and left 10 accounts as they were.

2 **Q. Please summarize how Mr. Pous developed his proposed lives and curve**
3 **selections.**

4 A. Mr. Pous reviewed the same data I did but did his curve fitting based on visual
5 examination , relying mainly on the earlier years of retirements. He then used
6 industry averages to justify his selections.

7 **Q. Is he correct in relying mainly on the earlier years of retirement?**

8 A. No, he is not. Robley Winfrey, considered the dean of depreciation and life
9 analysis, states in Bulletin 125 on page 91 (see Exhibit CRC-6) that when doing
10 curve fitting, the emphasis should be placed not on the first 20% of the curve or
11 the last 20% but rather on the information in the middle years. Mr. Winfrey
12 conducted detailed analysis of the probable error involved in fitting a smooth
13 survivor curve to an observed life table with varying percentages surviving. He
14 concludes:

15 “When survivor curves are to be classified according to the 18
16 types and the probable average life to be determined, it is
17 recommended that more weight be given to the middle portion of
18 the survivor curve, say that between 80 and 20 percent surviving,
19 than to the forepart or extreme lower end of the curve. This inner
20 section is the result of greater numbers of retirements and also it
21 covers the period of most likely the normal operation of the
22 property.”

23

1 Mr. Pous proposes exactly the opposite. For the most part, he agrees with my
2 analysis for the middle years of retirements. However, he places much more
3 weight on the earlier years, in contradiction to Mr. Winfrey's recommendations.

4

5 In my opinion, the curves I chose are a good fit both graphically and
6 mathematically and they are a better fit than Mr. Pous' suggestion. While I
7 placed the most emphasis on the intermediate years as recommended by Mr.
8 Winfrey, I also did take into account the same early years that Mr. Pous over-
9 emphasizes.

10 **Q. Mr. Pous claims that more weight should be placed on data points that**
11 **reflect larger dollar levels of exposures. Is he correct in this assertion?**

12 A. No, he is not. While it is important that exposures contain a statistically
13 significant sample size, the absolute dollar amount is unimportant. The data
14 points Mr. Pous chooses to ignore contain significant levels of exposures. By
15 focusing on the absolute dollar amount, Mr. Pous ignores the more meaningful
16 portion of the survivor curve – that is, the middle portion of the curve between
17 80% and 20% surviving.

18 **Q. Mr. Pous accuses you of relying on the “tail” of the curve is this true?**

19 A. This is not true. As mentioned above, I considered early years and intermediate
20 years with very little or no emphasis on the tail of the curve.

21 **Q. Throughout his testimony, Mr. Pous uses industry statistics to justify his**
22 **increase in average service lives, do you agree with his use of industry**
23 **statistics?**

1 A. Definitely not. Mr. Pous use of industry averages to justify his increases is
2 completely wrong. Average service lives can vary tremendously from company
3 to company. Some of the reasons for different service lives are geographical
4 location, maintenance practices, past accounting practices, continuing property
5 records systems, commission, weather, etc. This is similar in saying the life of a
6 Chevrolet, a Mercedes and a Ford pickup are all the same without even
7 considering their different uses, the way they are made, their drivers, etc.

8 **Q. Did you use industry statistics?**

9 A. Yes, I used industry statistics to compare the range of curves and lives to the
10 curves and lives I was proposing. If the lives were quite different from lives
11 being used for similar property in the industry then I investigated why. If data is
12 available in the detail it is at FPL then there is no need to rely on industry
13 averages other than for preliminary comparison purposes. If there is no data
14 available for a specific account, reliance on industry statistics may be all that is
15 available.

16 **Q. Mr. Pous, in his account-by-account analysis, often references that you used**
17 **different lives in depreciation studies for other companies than the lives you**
18 **are proposing here for the same accounts. Is this true?**

19 A. Yes, that is true. As I mentioned previously there are a number of reasons why
20 one company uses a certain average service life and another company uses a
21 longer or shorter life. These reasons include geographical location, maintenance
22 practices, accounting practices, past commission decisions, outside contractor
23 work, continuing property records, etc. Each company is independent. I also

1 want to point out that Mr. Pous also has used different lives in various
2 depreciation studies. For example, he agreed with a 60-year life for easements in
3 Nevada and is now recommending 95 years.

4 **Q. Would you please provide an account-by-account analysis of your proposed**
5 **curves and average service lives versus Mr. Pous recommendations?**

6 A. Yes. I will start with Account 350.2, which is Transmission Easements. For this
7 account, I proposed retaining the current 50-year average service life. The results
8 of the statistical analysis were poor as there are not many retirements in this
9 account. The 50 years is within the industry range of 40-60 years. There is no
10 reason to warrant a change from the current approved.

11

12 Mr. Pous increased the life to 95 years as a “conservative estimate.” This is
13 absurd; the maximum life of the transmission poles, towers, conductor, etc. would
14 only be half the maximum life used for the easements. He attempts to justify his
15 recommendation by saying other companies have used lives up to 70 years.
16 Perhaps this is true, but none even approach 95 years. He also attempts to taint
17 my selection by saying that I used 60 years in a recent case in Nevada, Docket
18 No. 06-11023. This statement is correct as far as it goes, but as I mentioned
19 previously there are different circumstances between companies. It is interesting
20 to note that in that same case in Nevada, Docket No. 06-11023 Mr. Pous also
21 accepted 60 years, which is much farther from his proposed life in this docket
22 than it is from mine.

1 It should also be noted that in a Florida Public Service Commission Staff Report
2 on depreciation in Docket No. 950359-EI, the Staff proposed that FPL use a 50-
3 year life for Transmission Easements.

4 **Q. What is the difference in Account 353, Transmission Substation Equipment?**

5 A. In this account I proposed increasing the curve and life from 36 R1.5 to a 38 R1.5.
6 The statistical analysis was good for this account and the data provided a good fit
7 to the 38 R1.5 curve and life. This curve was also the best fitting curve
8 mathematically. This curve was within the industry range of 30-60 years.

9
10 Mr. Pous wishes to increase the life even more to 43 years. His justification is
11 that his curve fits better in the early years of retirements and that 38 years is in the
12 low range of the industry statistics. If Mr. Pous had used the early retirements
13 and the middle retirements his curve would have looked different. He is also
14 wrong that I relied only on the “tail” of the curve when making my selection. Mr.
15 Pous says because this account is largely transformers which have a longer life
16 than the remainder of the account is justification for extending life. Mr. Pous
17 incorrectly characterizes the retirement rate method as being dependent on the
18 total retirements for an account. Instead, this method takes into consideration the
19 relationship of retirements to exposures for each age within an account. Unlike
20 Mr. Pous, I am not looking at overall retirements in our statistical analysis but
21 rather at retirements compared to exposures for each age.

22 **Q. Please discuss account 353.1 Step Up Transformers.**

23 A. I lowered the life for this account based on the results of the statistical analysis

1 from a 35 S3 to a 33 R2. The statistical analysis was good and showed a good fit
2 for the 33 R2 both graphically and mathematically.

3

4 Mr. Pous increased the life to 44 years based on his curve fitting. He attempts to
5 discount an early retirement saying if one were to remove it then the life would be
6 longer. Removing the retirement does not impact my analysis.

7 **Q. Please discuss Account 354 Towers and Fixtures.**

8 A. For this account I elected to retain the current approved 45 R5 life and curve.
9 There are very few retirements for this account and the results of the statistical
10 analysis were poor. The 45 years is low for this property compared to the
11 industry but I felt that there was not enough information to recommend a change
12 at this time.

13

14 Mr. Pous increases the life for this account to 60 years based solely on the
15 statistics of other companies. He provides no evidence that these companies are
16 an appropriate comparison with FPL. He is also wrong when he states that FPL
17 has surviving plant reaching the maximum life of this account. The maximum life
18 for the 45 R5 life and curve is over 60 years and the oldest FPL surviving plant at
19 December 31, 2009, is 49 years.

20 **Q. Please discuss Account 356 Overhead Conductors.**

21 A. I increased the current life from a 44 R1.5 to a 47 R1.5. The statistical analysis
22 was very good and provided a good fit for the 47 R1.5 both graphically and
23 mathematically. The 47-year life is within the industry range of 38-65 years. The

1 Company also mentioned that wind loading is a problem and could cause shorter
2 than normal lives.

3
4 Mr. Pous increases the life even greater to 51 years. He states that past
5 reconditioning has shown artificially shorter lives than will occur in the future,
6 and concludes that this has skewed the data. This assumption on his part is not
7 justified. He then goes on to use statistics and industry averages to justify his life
8 increase. Industry statistics should not be used when the data for this account is
9 excellent and fits the Iowa curve selection very nicely.

10 **Q. Please discuss Account 359 Roads and Trails.**

11 A. For this account the statistical analysis was limited because there were only few
12 retirements, which is typical for this property. I retained the currently approved
13 50-year life as there was no justification for extending it at this time. The industry
14 range was 40-74 and the 50 years falls within that range.

15
16 In a Florida Public Service Commission Report on depreciation in Docket No.
17 950359-EI, the Staff proposed that FPL use a 50-year life for this account, Roads
18 and Trails. Mr. Pous increases the life for this account to 65 years but really gives
19 no valid justification. He tries to justify his increase because I used longer lives in
20 other cases, but as previously discussed conditions were different and unique to
21 those cases and should not be relied upon in this case.

22 **Q. Please discuss Account 362 Distribution Substation Equipment**

23 A. I increased the life for this account from 38 R1.5 to 41 R1.5. The statistical

1 analysis was good for this account and the 41 R1.5 was the best fit both graphical
2 and mathematically. The range of the industry was 21-55 years.

3

4 Mr. Pous increased the life even more, to 48 years based on his curve fit. He says
5 that, when he removed outliers from the data, it showed increasing life to 48
6 years, yet he makes no indication as to what outliers he is talking about. He also
7 attempts to justify his increase by stating that in another case I used a longer life.
8 Again this should be discounted as the circumstances are completely different
9 from company to company.

10 **Q. Please comment on Account 364 Poles, Towers and Fixtures**

11 A. I increased the life for this account from a 34 R1.5 to a 37 R2 life and curve. The
12 statistical analysis produced excellent results and the 37 R2 curve produced the
13 best fitting curve and life both graphically and mathematically. The industry
14 range is 23-57 years. The Company told me they are replacing wood poles with
15 concrete poles where possible and the poles not being replaced will have a
16 program to help extend the life.

17

18 Mr. Pous increases the life for this account even further to 41 years. He justifies
19 this by saying his curve is a better fit looking at earlier retirements and that
20 because there is a plan to replace wood poles with concrete we need to extend
21 even further. First, there are already concrete poles in the data base and the
22 Company is not sure how many wood poles will be replaced with concrete. I am
23 already extending the life; to extend it even further is not justified at this time. He

1 also attempts to use industry average as a reason to extend, which is incorrect as I
2 previously discussed.

3 **Q. Please comment on Account 365 Overhead Conductors and Devices**

4 A. I increased the life for this account from 35 S0.5 to a 40 S0 life and curve. The
5 statistical analysis was good and the 40 S0 life and curve was a good fit both
6 graphically and mathematically. The industry range is 24-55 years. The main
7 cause of retirements of this account is deterioration, road widening, and storms.

8

9 Mr. Pous increased the life even further to 43 years. To justify his increase he
10 looks at a 20-year band but provides no explanation why he would use that band.
11 Mr. Pous also uses industry averages to attempt to support his increase even
12 though the Company data for this account is excellent.

13 **Q. Please comment on Account 367.6 Underground Conductor-Duct System**

14 A. I retained the current approved life of 38 years and a S0 curve. The statistical
15 analysis was good and showed a good fit for the 38 S0 life and curve. The
16 industry range was 28-53 years. There was no reason to change the current
17 approved.

18

19 Mr. Pous increased the life to 40 years based on his curve fitting of the earlier
20 retirements. He states that because 22% of the investment is tree retardant cable
21 some recognition of additional life is appropriate. This is misleading as I am not
22 aware that there has been an established life in the industry for tree retardant cable
23 that indicates a life longer than 38 years.

1 **Q. Please comment on Account 367.7 Underground Conductors – Direct Buried**

2 A. I increased the life slightly for this account from 34 R2.5 to 35 R2. The statistics
3 for this account were good although the data showed that retirements had fallen
4 off in the past 10 years, which would normally indicate an increasing life;
5 however, in the past couple of years, retirements started to increase again. I
6 increased the life slightly at this time and recommend waiting to see if the level of
7 retirements will return to historical levels. FPL advised that they were having
8 corrosion problems and are now using conduit instead of direct buried cable. I
9 would expect to see more retirements in the future.

10

11 Mr. Pous increases the life even further at this time to 43 years. His justification
12 for this increase is based on the slowing of retirements in the past few years.

13 **Q. Please comment on Account 368 Line Transformers**

14 A. I increased the life slightly for this account from 31 L2 to a 32 L1.5. The
15 statistical analysis for this account was good and the 32 L1.5 life and curve fit
16 good both graphically and mathematically. The industry range is 26-45 years.

17

18 Mr. Pous increased the life even further to 34 years. He feels his curve fitting of
19 the earlier retirements is a better fit than mine. He also brings up that there were
20 some significant retirements in early years that may make the data suspect;
21 however, FPL has not identified any unusual events that would make any impact
22 on our analysis. Mr. Pous uses this as a cause for longer average service lives.
23 He then goes on to discuss how industry averages support increasing the life.

1 **Q. Comment on Account 369.7 Distribution Underground Services**

2 A. At this time, I retained the currently approved 34 R2 life and curve for this
3 account. The life analysis showed that retirements are very small compared to the
4 exposures. After 50 years there is still 90% of the plant surviving. Over 50% of
5 this account is less than 20 years old. The industry range is 22-60 years, and FPL
6 is within that range.

7

8 Mr. Pous increased the life to 41 years based on his analysis of the data and
9 justified it by industry averages. I do not believe that industry averages is the
10 proper method to use as I have previously discussed.

11 **Q. Please comment on Account 370 Distribution Meters**

12 A. I increased the life for this account from a 34 S2 to a 36 R2.5. The statistical
13 analysis for this account was good and the 36 R2.5 life and curve fit good both
14 graphically and mathematically. The industry range is 18-43 years. This account
15 consists of meters not being replaced as part of the AMI program.

16

17 Mr. Pous increases the life even greater to 38 years. He bases his estimate on
18 curve fitting using the earlier years of retirements. He does not use industry
19 comparisons for this account.

20 **Q. Please comment on Account 373 Street Lighting & Signal Systems**

21 A. I increased this account from 20 S-0.5 to a 30 R0.5. The statistical analysis was
22 good and supports a 30 R0.5 life and curves both graphically and mathematically.

1 The industry range is 22-45 years although over half the companies report lives
2 30 years or less.

3

4 Mr. Pous increased the life even greater to 35 years. This is a significant increase
5 of 15 years. Mr. Pous again based his estimate on the earlier retirements in this
6 account. He also attempts to justify his estimate by stating that changes to street
7 lighting in the past such as changing from mercury vapor to sodium vapor
8 shortened lives, and that will not occur in the future, so therefore lives will be
9 longer. Given that the Company did not identify any changes in the near future, I
10 do not believe Mr. Pous has a valid basis for making this prediction.

11 **Q. Please discuss Account 390 Structures and Improvements**

12 A. I increased this life from 38 S1 to a 50 R1.5. The statistical analysis was good
13 and showed the 50 R1.5 curve fit the data good both graphically and
14 mathematically. The industry range is 35 - 65 years.

15

16 Mr. Pous would suggest increasing the life for this account to 56 years, which is a
17 47% increase in the average service life from the currently approved life. This is
18 a significant increase. He bases his recommendation on his curve fitting of the
19 earlier retirements. Mr. Pous also states that because 64% of the account is
20 buildings, which would have a longer average service life than the ancillary
21 components, the life for this account should be longer.. This is misleading as the
22 10 buildings that make up 64% of this account also include ancillary components
23 such as roofs, air conditioning, lighting systems, etc. There is no reason to

1 increase the average service life for this account 18 years based on this
2 justification.

3 **Q. Please comment on the Aircraft Accounts, both 390.01 fixed wing and 390.02**
4 **rotary.**

5 A. I recommend retaining the current 7-year life for these accounts. There was no
6 statistical information available for this account. The Company has depreciated
7 its aircraft over 7 years in the past and after having discussion with FPL personnel
8 they plan on retiring these aircraft within the same period as the previous aircraft.

9
10 Mr. Pous increases the life to 9 years. He says that, because there are still assets
11 in this account from vintage 1999 then the life for aircraft should be extended to
12 at least 9 years. Aircraft personnel have told me that they do have a large jet that
13 will be retiring next year that is older than 7 years, but on the whole, their
14 helicopters and airplanes last about 7 years.

15

16 **MASS PROPERTY NET SALVAGE**

17

18 **Q. Did you make any adjustments to mass property net salvage percentages?**

19 A. Yes. I reviewed the current net salvage estimates for mass property and increased
20 net salvage in 14 accounts, decreased net salvage in 6 accounts and left 16
21 accounts the same.

22 **Q. Did Mr. Pous make any adjustments to your estimates?**

23 A. Yes. Out of the 36 mass property accounts Mr. Pous decreased net salvage in 14

1 accounts. I will be addressing his adjustments in detail in this testimony.

2 **Q. Please discuss the issues that Mr. Pous took with your analysis of mass**
3 **property net salvage estimates?**

4 A. I would like to start with his incorrect statement on page 138 of his testimony that
5 “Limited or no cost of removal should occur with replacement activity” and his
6 reference to USOA Electric Plant Instructions 10B(2). He also claims that for the
7 retirement of property that is to be replaced, the cost of removal should be
8 charged to construction. This is also wrong. The following sections of the USOA
9 clearly state that cost of removal associated with a retirement should be charged
10 to accumulated depreciation; the USOA does not distinguish between retirements
11 for replacement and retirement without replacement.

12

13 1. Electric Plant Instruction 11(A) applies to the cost of removal that relates to
14 the retirement, with or without replacement:

15 *“...all items relating to the retirements shall be kept separate from*
16 *those relating to construction...,”*

17 2. The description of Account 108, Accumulated Provision for Depreciation of
18 Electric Plant, states in paragraph B states that this treatment is for retirements
19 with or without replacement:

20 *“At the time of retirement of depreciable electric plant, this*
21 *account shall be charged with the book cost of property retired*
22 *and the cost of removal,”*

23 3. Electric Plant Instruction 10(B)(2) specifies that there is no distinction

1 between retirements with replacements and retirements without replacements:

2 “ *when a retirement unit is retired from electric plant with or*
3 *without replacement the book cost thereof shall be credited to the*
4 *electric plant account in which it is included, determined in the*
5 *manner set forth in Paragraph D below. If the retirement unit is of*
6 *depreciable class, the book cost of the unit retired and credited to*
7 *electric plant shall be charged to accumulated provision for*
8 *depreciation applicable to such property. The cost of removal and*
9 *salvage shall be charged or credited, as appropriate, to such*
10 *depreciation account.”*

11 4. Electric Plant Instruction 10(F) states:

12 *“The book cost less net salvage of depreciable electric plant shall*
13 *be charged in it's entirety to Account 108 Accumulated Provision*
14 *for Depreciation of Electric Plant in Service...”*

15 **Q. Are Mr. Pous' assertions correct?**

16 A. No. Mr. Pous' interpretation of the accounting for the replacement of property is
17 wrong. As these electric plant instructions point out, salvage and cost of removal
18 should be recorded with the retirement and not as part of new construction.

19 **Q. Could you respond to the other allegations made by Mr. Pous concerning**
20 **your overall analysis of mass property net salvage?**

21 A. Yes. Mr. Pous summarizes my analysis as “nothing more than acceptance of
22 simple arithmetic averages of historical data.” This is completely wrong. The
23 estimates were not simple arithmetic averages but instead were based on informed

1 judgment that incorporated analysis of historical cost of removal and gross
2 salvage data, as well as expectations with respect to future levels of removal costs
3 and gross salvage. The historical data included in the statistical analysis were cost
4 of removal and gross salvage compared to retirements for a 22-year period, 1986
5 through 2007. This data was separately analyzed as percents of the original cost
6 retired on annual, 3-year moving average and the most recent 5-year average
7 bases. The average percent for the entire study period 1986-2007 also were
8 determined. Cost of removal and gross salvage are calculated separately in order
9 to assist in detecting trends in these components of net salvage. Moving averages
10 are used to smooth the indications of net salvage that can fluctuate from year to
11 year. Data that appeared unreasonable was either removed from the analysis or
12 given less weight in the analysis. Input from FPL personnel was evaluated and
13 incorporated in the final results. Results were also compared to other industry
14 companies for reasonableness.

15 **Q. Mr. Pous alleges that you of picking and choosing results to obtain more**
16 **negative net salvage levels than would otherwise be the case, is this true?**

17 A. Absolutely not. I was looking for trends in the data. Sometimes the data was
18 consistent over the entire 22-year period and a trend could be developed but not
19 always, there were instances where the trend was recent and more weight was
20 placed on this data. In no way did I analyze data with a particular result in mind.

1 **Q. Mr. Pous criticizes you for removing reimbursed retirements from the data,**
2 **even though these events occur on an annual basis and are not outliers. Is**
3 **this true?**

4 A. Again this is a false accusation by Mr. Pous. All reimbursed retirements were not
5 removed from the analyses. Reimbursed retirements that were considered
6 reoccurring on a regular basis were included. However, government mandated
7 projects that were considered nonrecurring were removed. These included
8 relocations for the Department of Transportation and the installation of new
9 Metrorail line. Retirements related to hurricanes were also removed from the
10 data.

11
12 It should also be noted that while Mr. Pous recommends including reimbursed
13 retirements in the analysis for net salvage, which would likely result in a
14 reduction of depreciation expense, he does not recommend including them in the
15 analysis for the service lives of FPL assets, which would result in an increase in
16 depreciation expense. It is neither systemic, nor rational, to include these
17 retirements for one type of analysis but not for another. I have excluded these
18 retirements from both sets of analyses.

19 **Q. Could you discuss Mr. Pous' reference to "economies of scale."**

20 A. Economies of scale in construction occur when projects increase in size. For
21 instance, when removing poles, the cost per pole would decrease if a utility was to
22 remove ten poles on a street versus one pole on the same street. Mr. Pous would

1 have us believe that, in the future, more frequent retirements will be occurring and
2 therefore there will be savings in the unit cost of removal.

3 **Q. Do you agree?**

4 A. According to the data we used in our life analysis retirements have been occurring
5 very slowly over the past years, retirement activity may increase as plant gets
6 older, however, retirements are spread over a long period of time and there is not
7 enough information that points to any significant reduction in removal costs from
8 economies of scale. Retirements would need to occur in large quantities in areas
9 of close proximity to receive any benefits.

10 **Q. Does growth affect how Mr. Pous anticipates economies of scale?**

11 A. Yes, load growth leads to addition and retirement activity that tends to keep the
12 age of retirements from increasing to an age equal to the average service life.
13 Therefore, retirement age is unlikely to increase enough for any further economies
14 of scale than have already occurred.

15 **Q. Mr. Pous says your proposed net salvage percents are among the most
16 negative in the industry, is that true?**

17 A. No. This is another of Mr. Pous false claims. I compared the results of my
18 analysis to the industry and FPL's net salvage percentages are well within the
19 industry range. Some accounts were in the high range and some were in the lower
20 range, but there was no consistent trend in either direction.

21 **Q. Could you discuss net salvage for each account Mr. Pous makes adjustments
22 to?**

23 A. Yes. For all Mr. Pous' criticism of my methodologies he has only made

1 adjustments to 14 of the 36 accounts analyzed. Of course, just as his service life
2 adjustments all increased my life estimates, he is again biased toward decreasing
3 all my net salvage estimates.

4 **Q. Please discuss Account 353, Station Equipment.**

5 A. For this account, I changed the currently approved rate of 5% to (10)%. The
6 historical data showed a definite trend towards negative net salvage. The industry
7 range is 5% to (20)%.

8

9 Mr. Pous instead recommends zero net salvage. He claims that unusual values in
10 the database have skewed the data and as a result my estimate is inappropriate.
11 He claims to have investigated these values, but the results of his "investigation"
12 are in some ways bizarre. He claims that significant cost of removal experienced
13 in 2007 is driven by the retirement of a building with a high level of asbestos. Yet
14 substation buildings are not in this account; they are instead in Account 352.
15 Further, the work order he cites in discussing this retirement clearly indicates that
16 the retirement is for Account 352 and is dated May 29, 1990. It is entirely unclear
17 how this retirement affects the analysis for Account 353, Station Equipment.

18 **Q. Please discuss Account 354, Towers and Fixtures.**

19 A. For this account I retained the currently authorized (15)% net salvage. The
20 industry range for this account is 0 to (50)%. The data for this account is
21 sporadic, but does show a general decline in gross salvage percents and a general
22 increase in cost of removal percents.

1 Despite this trend, Mr. Pous instead recommends a net salvage percent of zero.
2 Mr. Pous' argument hinges on his claim that reimbursed retirements should be
3 included in his analysis. As I have discussed, this is not a valid claim.

4

5 Mr. Pous specifically claims that the database used for analysis for this account
6 conflicts with other provided data. In particular, the data used for the study
7 differs from the booked cost of removal provided for OPC's first set of
8 interrogatories and production of documents. The discrepancy is for transaction
9 year 2006 and is related to large hurricane related retirements. Retirements
10 related to hurricanes have been removed from all the databases analyzed in
11 determining life and salvage parameters as they are unexpected events that are not
12 indicative of the future activity for an account.

13 **Q. Please discuss Account 355, Poles and Fixtures.**

14 A. For this account I have elected to retain the currently authorized net salvage
15 percent of (50)%. The net salvage rates over the past five and fifteen years are
16 (55)% and (49)% respectively. Removal costs for wood poles are expected to
17 increase due to changes in regulations.

18

19 Mr. Pous makes a number of arguments for this account that I have addressed
20 previously. He claims that that reimbursed retirements and hurricane retirements
21 should be included in the net salvage analysis for this account and that
22 "economies of scale" will reduce removal costs in the future. As previously
23 discussed, these arguments are flawed and should be rejected.

1 Mr. Pous also argues that I have ignored recent trends in the data, which he states
2 is inconsistent with my analysis for Account 355. He claims that there is a trend
3 towards lower levels of negative net salvage in recent years. However, a more
4 detailed look at the history of this account reveals that there is more of a cyclical
5 trend, as opposed to a trend of either strictly increasing or strictly decreasing
6 amounts of net salvage. Throughout the history of this account, both cost of
7 removal and salvage have varied from higher to lower levels as a percent of
8 retirements. Given that the historical trend is cyclical, it is appropriate to put
9 more weight on the full band of experienced net salvage than on recent bands.

10 **Q. Please address Account 356, Overhead Conductors and Devices.**

11 A. For this account, I have proposed to change the currently authorized net salvage
12 percent of (45)% to (50)%. The overall average net salvage for this account is
13 (50)%, and rolling bands show consistent negative net salvage. The industry
14 range is 0 to (80)%.

15

16 Mr. Pous proposes a (40)% net salvage estimate. He bases his estimate on his
17 stance on reimbursements, his stance on economies of scale, and on the scrap
18 proceeds for copper wire. I have discussed his arguments on reimbursements and
19 economies of scale earlier in my testimony. His arguments on these issues should
20 be rejected.

21

22 Regarding future gross salvage from copper wire, Mr. Pous' argues that higher
23 scrap prices for copper will lead to future gross salvage for copper wire to be

1 higher than the levels the company has historically experienced. This argument is
2 quite thin. First, as he himself points out, only 3% of the account is copper wire.
3 Additionally, the composite remaining life for this account is over 36 years. Mr.
4 Pous cannot possibly know copper price trends 36 years into the future. Yet he
5 claims on page 159 of his testimony that gross salvage will be “disproportionately
6 higher” in the future than has been experienced in the past. This claim is highly
7 speculative and should be rejected, especially because it pertains to such a small
8 portion of this account.

9 **Q. Please address Account 364, Distribution Poles, Towers and Fixtures.**

10 A. For this account, I changed the currently authorized net salvage percent of (40)%
11 to (125)%. Recent activity suggests that net salvage is significantly negative – as
12 much as (193)% in 2006. The overall band of my analysis experienced an
13 average of (76)% net salvage, but the most recent five-year band was (157)%.
14 While my estimate of (125)% is at the upper (more negative) industry range of
15 (10)% to (135)%, industry-wide the trend is for increasingly negative net salvage
16 estimates. More recent studies I have performed indicated experienced net
17 salvage for this account beyond the upper range of my industry database.

18
19 Mr. Pous proposes a net salvage percent of (60)%. This estimate is far less
20 negative than the overall average of (76)%, and less than 40% of the five-year
21 average experienced net salvage of (157)%. FPL has experienced at least (111)%
22 net salvage for each of the past five years, and has only experienced net salvage

1 below (84)% in two of the past ten years. Clearly Mr. Pous has proposed an
2 estimate that is far less negative than the Company's actual experience.

3
4 Mr. Pous' again argues that reimbursed retirements should be included in the
5 analysis. As I have discussed, this argument should be rejected. However, it is
6 important to note that Mr. Pous' proposal of (60)% is even lower than the
7 resulting average net salvage if these retirements are included in the database.

8
9 Mr. Pous also appears to claim that because 18% of the investment in this account
10 is concrete poles, concerns about the effect of regulations on the removal costs for
11 wood poles are irrelevant. This is a confusing claim given that in his discussion
12 of Account 356, he argued that copper wire - which comprised only 3% that
13 account - would have a significant impact on future gross salvage. If Mr. Pous
14 really believes that speculative future scrap values affecting 3% of one account
15 will have a major impact on future expectations of net salvage, then surely he
16 must concede that actual regulations that will increase removal costs for the
17 majority of property in this account will have an impact on future net salvage.
18 Mr. Pous attempts to bolster his argument by claiming that future additions will
19 lead to a higher proportion of the investment in this account to be concrete poles.
20 This is an irrelevant point, as the scope of the Depreciation Study relates only to
21 plant in service, not to future additions.

22
23 On page 163 of his testimony, Mr. Pous' final argument is that removal costs have

1 been higher in the past five years because that time frame is “associated with a
2 significant increase in hurricane-related events, which may partially explain what
3 appears to be excessively high negative net salvage levels.” This argument is
4 flawed. FPL has removed hurricane related retirements from its analysis, and as a
5 result, any increased removal costs due to hurricanes during this time period
6 would have no impact on FPL’s estimate.

7 **Q. Also on page 163 of his testimony, Mr. Pous claims that his estimate for this**
8 **account is conservative because it “still provides the company with**
9 **approximately seven times the average level of negative net salvage it has**
10 **experienced over the past 22 years and 138% of the highest level the**
11 **Company has ever experienced.” Is this a valid comparison?**

12 **A.** No, Mr. Pous makes an inaccurate comparison. His claim is that with a (60)% net
13 salvage estimate, the annual accruals related to net salvage for each year will still
14 exceed the company’s actual experienced net salvage in the past. This is a
15 suspicious argument. Comparing the absolute levels of historical net salvage and
16 the absolute levels of future net salvage accruals is not a relevant exercise, as past
17 and future levels of retirements are not the same.

18
19 A net salvage estimate is not an effort to estimate the net salvage amounts
20 experienced by FPL in its historical retirements, but instead is an estimate used to
21 recover the future costs associated with retiring plant currently in service. Future
22 costs will likely be substantially greater than historical costs on absolute terms
23 because of growth and inflation. As a result, it is more appropriate to compare the

1 ratio of net salvage costs to retirements. Using this comparison, Mr. Pous'
2 estimate is well below FPL's actual experience. Thus, Mr. Pous' proposal is not
3 at all conservative. Instead, significantly under recovers future net salvage when
4 compared to FPL's actual net salvage experience.

5 **Q. Please address Account 365 Overhead Conductors & Devices.**

6 A. For this account I increased the net salvage from the current (50)% to (100)%
7 based on the trends of comparing cost of removal and salvage to retirements.
8 Although gross salvage has been recently increasing, the cost of removal is
9 increasing tremendously. In the past 5 years the net salvage is (91)% and the past
10 two years are over (100)%. Using rolling bands also shows net salvage at (99)%.

11
12 Mr. Pous attempts to taint the data by pointing out a negative gross salvage
13 amount in 2006 and saying that I did not investigate this amount. I was aware
14 that this amount was probably recorded incorrectly and deemed it an outlier;
15 however, by assuming an average salvage amount for this year, the net salvage
16 percent would still be over 90% negative.

17
18 Mr. Pous also attempts to say that I manipulated the data by excluding certain
19 reimbursements. Neither the Company nor I manipulated the data and any
20 reimbursements that should have been excluded were properly excluded. He also
21 brings up an argument that 10% of the account made up of switches is skewing
22 the data. This is not a valid point because we are looking at all retirements not
23 just 10% of the investment.

1 **Q. Please discuss Account 366.6, Underground Conduit – Duct System.**

2 A. For this account, I recommend to reduce the currently authorized estimate of
3 (10)% to (5)%. The twenty year and five year net salvage rates are (3)% and 0%
4 respectively. The three-year rolling bands indicate decreasing (less negative) net
5 salvage. The industry range is 0 to (50)%.

6

7 Mr. Pous again bases the majority of his argument on the fact that reimbursed
8 retirements have been removed from the analysis. This argument should be
9 rejected for reasons I have discussed previously.

10

11 Mr. Pous also makes the claim that most utilities abandon underground conduit in
12 place, except where it is economical do remove it. In other words, he asserts that
13 the only instances where the company would remove conduit gross salvage would
14 exceed the removal cost. This is simply not true. There are many instances of the
15 removal of underground conduit where removal cost exceeds gross salvage, such
16 as when a third party accidentally digs up an underground line and the conduit
17 needs to be replaced. The net salvage analysis disputes Mr. Pous' assertion as
18 well, as the average net salvage over FPL's history is negative.

19 **Q. Please discuss Account 367.6, Underground Conductors and Devices – Duct
20 System.**

21 A. For this account, I recommend keeping the existing estimate of (5)%. Cost of
22 removal is decreasing, but net salvage overall is still negative. The industry range
23 for this account is 25 to (40)%.

1 Mr. Pous argues that the data I have relied indicates that an estimate of zero net
2 salvage is more appropriate. I disagree. The company has experienced negative
3 net salvage in the vast majority of years in its historical database. The three-year
4 moving averages, which smooth out noise in the data, show negative net salvage
5 for almost every year as well. Additionally, Mr. Pous' analysis is heavily
6 weighted towards more recent three-year moving averages. However, these
7 averages have been heavily impacted by large final gross salvage amounts in 2006
8 and 2007 – amounts that total over 30% of the final salvage in the entire historical
9 database. Mr. Pous emphasizes these years without any indication as to whether
10 these levels of gross salvage will continue into the future. A more balanced
11 analysis of FPL's history justifies maintaining the currently authorized estimate of
12 (5)%.

13 **Q. Please discuss Account 368 Line Transformers.**

14 A. I reduced the current (35)% net salvage to (25)%. This is based on a decline in
15 cost of removal over the recent years and practically no gross salvage. The
16 overall average of 22 years is (25)% and is similar for the rolling bands and the
17 more recent 5-year band.

18
19 Mr. Pous would like to reduce the net salvage even more to (20)% based on his
20 assumption that “the Company manipulated the data” on page 168 of his
21 testimony. This is not correct. He also uses some minor negative gross salvage
22 amounts to question my results but has no facts for lowering my recommendation.

1 **Q. Please discuss Account 369.1, Services – Overhead.**

2 A. For this account I increased the net salvage from (60)% to (125)%. The data
3 clearly shows that net salvage is increasing, to over (200)% in some of the more
4 recent years. At the same time gross salvage has been decreasing. The 5-year
5 average is (189)% and the 3-year rolling bands show close to (200)%. Mr. Pous
6 sees the trend but limits his increase in net salvage to (85)%.

7

8 Mr. Pous refuses to accept the fact that the net salvage is showing percentages
9 well over (100)% and into the (200)%s range because the Company cannot
10 provide a reason why FPL has higher net salvage for Account 369.1 than the other
11 industry companies I used in my industry comparisons. This is a ridiculous
12 argument. There are many factors that influence this amount such as the
13 individual company's accounting policies, O&M practices, management policies,
14 etc. As such, a direct comparison of FPL to the companies in my industry group
15 would not be an "apples to apples" comparison. Just because the Company
16 follows its own practices is not a reason for Mr. Pous to reject the results of this
17 analysis.

18

19 Mr. Pous also questions FPL accounting policies on replacement and replacing as
20 a reason for high cost of removal for this account. He is incorrect; the Company
21 follows the proper methodology for accounting as previously discussed.

22 **Q. Please discuss Account 369.7, Services – Underground.**

23 A. For this account I elected to not change the current authorized net salvage of

1 (10)%. The cost of removal shows an increasing trend over the past few years,
2 which on its own could suggest using a more negative net salvage value, but the
3 recorded gross salvage is suspect for 2005 and 2006. Therefore, I left the net
4 salvage unchanged at (10)%, which is conservative in view of the fact that it has
5 been more negative in some of the last few years.

6
7 Mr. Pous attempts to confuse the record by discussing that there was higher cost
8 of removal in years 2004 to 2007 for underground services than there was for
9 years 2000 to 2003 when there were more underground services retired. I am not
10 sure what point he is trying to make. The net salvage percent is developed by the
11 relationship of the cost of removal and gross salvage to the total retirements made
12 in any given year, all based on dollars retired not quantities.

13
14 He then states that the Company policy is to abandon in place direct buried cable
15 and this should account for zero net salvage. Again we are looking at retirements
16 of the entire account not just a small piece.

17 **Q. Please discuss Account 370, Meters.**

18 A. Mr. Pous' objection to my net salvage estimate is based on the fact that the
19 company will be retiring approximately 4.3 million meters over the next five
20 years as a result of its AMI program. He states that this project will alter the
21 experienced net salvage in the future. His claim might be correct, but it has
22 absolutely no bearing on the contents of this account. All meters that will be
23 retired due to the AMI program have been removed from this account into a

1 capital recovery schedule. The (55)% estimate that I have made for this account
2 relates only to those meters that will *not* be retired for the AMI program.

3 **Q. Please discuss Account 370.1, Meters – AMI.**

4 A. The recovery of the meters that are being retired and replaced with AMI meters is
5 being proposed to be recovered over a four-year amortization period as described
6 in Table 7 in Exhibit CRC-1, page 55. There is no reason at this time to estimate a
7 different net salvage percent for the new AMI meters than for the meters that are
8 not being replaced. Therefore, I propose to use (55)% net salvage for the new
9 AMI meters.

10 **Q. Please Discuss Account 390 Structures and Improvements.**

11 A. For this account I reviewed the retirements over the 22-year period and observed
12 that net salvage was either zero or in most cases negative. As a matter of fact in
13 the past 10 years net salvage in negative in all but 2 years and rounding to (10)%
14 or more. The past five year average is (10)%. Therefore, I proposed to increase
15 net salvage from zero to (10)% for this account.

16

17 Mr. Pous changes his whole approach to net salvage for this account. He claims
18 because FPL has not retired any major buildings, historical data in this account is
19 for other assets such as roofs, HVAC, ceilings, and other ancillary parts of the
20 structure. These are exactly the type of structures and equipment that are
21 expected to retire in the future. These assets comprise the bulk of this account.
22 He attempts to say that this account is made up of 10 buildings; however, he
23 forgets to say that these buildings are made up of the previously mentioned

1 retirement units. These assets have had and are expected to have a net salvage of
2 (10)%.

3

4 Mr. Pous states that the trend in commercial real estate has been toward
5 substantial appreciation. I am not sure what state he is talking about, but it is
6 certainly not the case in Florida since 2005. He says FPL's offices are worth
7 much more than their original cost. This is misleading. If FPL were to retire any
8 of their buildings they would probably be worthless as-is, without improvements.
9 Only the land would be of value. However, the land is owned by shareholders,
10 who receive no return of their capital through rates. Mr. Pous is wrong in his
11 recommendations for this account.

12

13 THEORETICAL RESERVE ADJUSTMENT

14

15 **Q. Would you like to comment on Mr. Pous' theoretical reserve adjustment and**
16 **theoretical reserve calculation in his testimony?**

17 A. Yes, I would.

18 **Q. Mr. Pous has proposed to decrease annual depreciation expense by \$552**
19 **million. Are there any problems with his calculation of this decrease?**

20 A. Yes, there is. Mr. Pous is proposing an adjustment to the book reserve in an
21 attempt to align it more with the calculated or theoretical reserve. This
22 adjustment accounts for \$331 million, or approximately 60% of his total decrease

1 in annual depreciation expense. FPL witness Davis will address this particular
2 issue and the adjustment in his testimony.

3

4 However, I would like to point out that Mr. Pous calculated his proposed annual
5 depreciation expense incorrectly in his method. Since Mr. Pous is proposing a
6 \$1.25 billion adjustment to the book reserve, he should have calculated
7 depreciation expense using the adjusted book reserve. He instead used the same
8 “unadjusted” book reserve I used in the depreciation study. As a result, his
9 calculation significantly understates annual depreciation accruals.

10 **Q. Why should Mr. Pous have used the restated book reserve for his**
11 **calculations?**

12 A. Mr. Pous’ proposed \$1.25 billion adjustment to the book reserve would result in
13 an equivalent \$1.25 billion increase in future depreciation accruals to be collected
14 over the remaining life of FPL’s current plant in service. To properly calculate
15 annual depreciation expense, Mr. Pous should have included this adjustment in
16 his calculation of annual depreciation expense. Instead, he did not, which results
17 in artificially low depreciation rates. His calculated rates do not reflect the fact
18 that, based on his adjustment to the reserve, FPL will have to collect an additional
19 \$1.25 billion through depreciation rates in the future.

20

21 In addition to the fact that he has proposed to reduce depreciation expense directly
22 through a reserve adjustment, he also wants depreciation rates to be lower due to a
23 higher, unadjusted book reserve. This proposal is entirely inappropriate, as it is

1 an attempt to reduce depreciation both through a direct adjustment to the reserve
2 and through the benefit of lower rates than the higher, unadjusted book reserve
3 would provide. Mr. Pous' proposed depreciation expense reduction therefore
4 needs to be rejected.

5 **Q. Mr. Pous has calculated the theoretical reserve that would result using his
6 proposed depreciation parameters. Is his calculation correct?**

7 A. No, it is not. Specifically, Mr. Pous has incorrectly calculated the theoretical
8 reserve for production plant. He has not included the interim retirement rates he
9 proposes in his calculation of the theoretical reserve.

10 **Q. How has Mr. Pous calculated the theoretical reserve for production plant?**

11 A. Using the prospective method for calculating theoretical reserve, as required in
12 Florida, the theoretical reserve is equal to the total calculated accruals less the
13 theoretical future accruals. The total future accruals are equal to the original cost
14 of plant less future net salvage. The total theoretical future accruals are equal to
15 the ratio of the remaining life divided by the average service life multiplied by the
16 total calculated accruals.

17

18 For production plant, Mr. Pous has not adjusted the remaining life or the average
19 service life for each generating unit to account for interim retirements. He has
20 instead simply used the remaining life for the unit and entire life for the unit. This
21 is incorrect. Both the remaining life and the whole life for the generating unit
22 need to be adjusted for interim retirements.

CORRECTIONS

1

2

3 **Q. Did you make any changes to your original filed testimony?**

4 A Yes. In the course of responding to interrogatories, I discovered an error in the
5 summary of Account 354 Towers and Fixtures in my recommendation for an
6 average service life. As pointed out in Exhibit CRC-9 I originally stated that the
7 curve and life should be 40 R5 when it should have been a 45 R5.

8 **Q. Does this change affect the results of your study?**

9 A. Yes it does. This increase in average service life should decrease annual
10 depreciation expense by approximately \$1.5 million.

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

12 A. Yes.

Florida Power & Light Company
Life Spans of Retired US Coal Generating Units, 10 MW or Greater

<u>Unit</u> (1)	<u>Installation Year</u> (2)	<u>Retirement Year</u> (3)	<u>Life Span</u> (4)
<u>AES CORP</u>			
AES GREENIDGE 1	1938	1985	47
AES GREENIDGE 2	1943	1985	42
AES WESTOVER 5	1924	1975	51
AES WESTOVER 6	1927	1972	45
<u>ALABAMA POWER CO</u>			
GORGAS TWO 04	1929	1977	48
GORGAS TWO 05	1944	1989	45
<u>ALLEGHENY ENERGY SUPPLY CO LLC</u>			
CELANESE (MD) 1	1937	1978	41
CUMBERLAND (MD) HP1	1938	1970	32
RP SMITH 1	1923	1970	47
RP SMITH 2	1927	1970	43
SPRINGDALE WPP 1	1920	1973	53
SPRINGDALE WPP 2	1920	1973	53
SPRINGDALE WPP 3	1924	1973	49
SPRINGDALE WPP 4	1924	1973	49
SPRINGDALE WPP 5	1926	1973	47
SPRINGDALE WPP 6	1935	1971	36
<u>AMERENCILCO</u>			
LIBERTY STREET 5	1920	1971	51
RS WALLACE 1	1925	1976	51
RS WALLACE 2	1925	1976	51
RS WALLACE 3	1939	1985	46
RS WALLACE 4	1941	1985	44
RS WALLACE 5	1949	1985	36
RS WALLACE 6	1952	1985	33
RS WALLACE 7	1958	1985	27
<u>AMERENERGY GENERATING CO</u>			
GRAND TOWER 1	1922	1972	50
GRAND TOWER 2	1923	1972	49
<u>AMERENUE</u>			
CAHOKIA 1	1923	1975	52
CAHOKIA 2	1924	1975	51
CAHOKIA 3	1925	1975	50
CAHOKIA 4	1927	1975	48
CAHOKIA 5	1929	1976	47
CAHOKIA 6	1937	1976	39
MEXICO 2	1950	1980	30
<u>AMES MUNI ELEC SYSTEM (IA)</u>			
AMES (IA) TWO 6	1958	1986	28
<u>APPALACHIAN POWER CO</u>			
CABIN CREEK (WV) 3	1919	1974	55
CABIN CREEK (WV) 4	1921	1974	53
CABIN CREEK (WV) 5	1925	1974	49
CABIN CREEK (WV) 6	1927	1974	47
CABIN CREEK (WV) 8HP	1943	1981	38
CABIN CREEK (WV) 8LP	1942	1981	39
CABIN CREEK (WV) 9HP	1943	1981	38
CABIN CREEK (WV) 9LP	1943	1981	38
GLEN LYN 2	1920	1974	54
GLEN LYN 3	1924	1974	50
GLEN LYN 4	1927	1974	47
<u>BALTIMORE GAS & ELEC CO</u>			
PRATT STREET 11	1919	1972	53

Florida Power & Light Company
Life Spans of Retired US Coal Generating Units, 10 MW or Greater

Unit (1)	Installation Year (2)	Retirement Year (3)	Life Span (4)
<u>BEECHBOTTOM POWER CO</u>			
WINDSOR (WV) 1	1918	1973	55
WINDSOR (WV) 2	1918	1975	57
WINDSOR (WV) 3	1919	1975	56
WINDSOR (WV) 4	1919	1973	54
WINDSOR (WV) 5	1919	1975	56
WINDSOR (WV) 6	1919	1973	54
WINDSOR (WV) 7	1939	1975	36
WINDSOR (WV) 8	1941	1973	32
<u>BLACK HILLS POWER INC</u>			
KIRK (SD) 4	1956	1996	40
<u>BURLINGTON ELECTRIC DEPT</u>			
MORAN 2	1954	1986	32
<u>CELINA MUNI UTILITIES</u>			
CELINA 4	1971	1973	2
<u>CLEVELAND PUBLIC POWER</u>			
LAKE ROAD (OH) 04	1918	1970	52
LAKE ROAD (OH) 05	1922	1970	48
LAKE ROAD (OH) 06	1928	1970	42
LAKE ROAD (OH) 07	1942	1970	28
LAKE ROAD (OH) 08	1941	2003	62
LAKE ROAD (OH) 09	1953	2003	50
<u>COLUMBUS DIV OF ELEC (OH)</u>			
COLUMBUS (OH) 6	1950	1977	27
<u>COLUMBUS SOUTHERN POWER (OH)</u>			
CONESVILLE 1	1959	2005	46
CONESVILLE 2	1957	2005	48
PICWAY 1	1926	1972	46
PICWAY 2	1926	1972	46
PICWAY 3	1943	1980	37
PICWAY 4	1949	1980	31
POSTON 1	1949	1987	38
POSTON 2	1950	1987	37
POSTON 3	1952	1987	35
POSTON 4	1954	1987	33
<u>COMMONWEALTH EDISON CO</u>			
DIXON 4	1945	1978	33
DIXON 5	1953	1978	25
FORDAM 01	1919	1971	52
FORDAM 04	1924	1971	47
FORDAM 09	1947	1971	24
FORDAM 10	1947	1971	24
JOLIET CECO 1	1917	1970	53
JOLIET CECO 2	1918	1970	52
JOLIET CECO 3	1924	1970	46
JOLIET CECO 4	1941	1970	29
JOLIET CECO 5	1950	1978	28
NORTHWEST 1	1912	1970	58
NORTHWEST 2	1912	1970	58
NORTHWEST 3	1915	1970	55
NORTHWEST 4	1917	1970	53
NORTHWEST 5	1917	1970	53
NORTHWEST 6	1918	1970	52
NORTHWEST 7	1942	1970	28
WAUKEGAN CECO 1	1923	1972	49
WAUKEGAN CECO 2	1925	1972	47
WAUKEGAN CECO 3	1927	1972	45
WAUKEGAN CECO 4	1930	1978	48
WAUKEGAN CECO 5	1932	1978	46

Florida Power & Light Company
 Life Spans of Retired US Coal Generating Units, 10 MW or Greater

<u>Unit</u> (1)	<u>Installation Year</u> (2)	<u>Retirement Year</u> (3)	<u>Life Span</u> (4)
<u>CON EDISON CO OF NY INC</u>			
EAST RIVER 1	1927	1975	48
EAST RIVER 2	1927	1974	47
EAST RIVER 4	1929	1975	46
HELL GATE CECO 1	1946	1974	28
KENT AVENUE 10	1938	1972	34
KENT AVENUE 11	1938	1972	34
SHERMAN CREEK 01	1913	1972	59
SHERMAN CREEK 02	1913	1972	59
SHERMAN CREEK 03	1913	1972	59
SHERMAN CREEK 04	1919	1972	53
SHERMAN CREEK 05	1921	1972	51
SHERMAN CREEK 07	1938	1972	34
SHERMAN CREEK 08	1938	1972	34
SHERMAN CREEK 09	1943	1972	29
SHERMAN CREEK 10	1947	1972	25
<u>CONNECTIV ENERGY</u>			
DEEPWATER (NJ) 5	1942	1994	52
DEEPWATER (NJ) 7	1957	1994	37
MISSOURI AVENUE 6	1941	1975	34
MISSOURI AVENUE 7	1946	1973	27
<u>CONSTELLATION ENERGY POWER GEN</u>			
GOULD STREET 1	1927	1977	50
GOULD STREET 2	1928	1977	49
<u>CONSUMERS ENERGY CO (MI)</u>			
ELM STREET 1	1913	1973	60
ELM STREET 4	1937	1973	36
KALAMAZOO 1	1927	1972	45
SAGINAW RIVER 3	1928	1972	44
SAGINAW RIVER 4	1930	1972	42
SAGINAW RIVER 5	1930	1972	42
WEALTHY STREET 1	1929	1972	43
<u>DANVILLE ELECTRIC DIV</u>			
BRANTLY 2	1952	1979	27
BRANTLY 3	1953	1979	26
<u>DAYTON POWER & LIGHT CO (OH)</u>			
FM TAIT 4	1958	1987	29
FM TAIT 5	1959	1987	28
TROY (OH) 6	1964	1974	10
<u>DETROIT EDISON CO</u>			
CONNERS CREEK 02	1935	1973	38
CONNERS CREEK 04	1918	1972	54
MARYSVILLE 2	1922	1972	50
MARYSVILLE 3	1923	1972	49
MARYSVILLE 4	1928	1973	45
MARYSVILLE 5	1928	1972	44
PENNSALT 16	1948	1986	38
PENNSALT 17	1949	1986	37
TRENTON CHANNEL 1	1926	1973	47
TRENTON CHANNEL 2	1926	1974	48
TRENTON CHANNEL 3	1927	1973	46
TRENTON CHANNEL 5	1928	1973	45
TRENTON CHANNEL 6	1929	1973	44
<u>DOMINION ENERGY INC</u>			
STATE LINE 1	1929	1977	48
STATE LINE 2	1938	1979	41

Florida Power & Light Company
 Life Spans of Retired US Coal Generating Units, 10 MW or Greater

Unit (1)	Installation Year (2)	Retirement Year (3)	Life Span (4)
<u>DOMINION VIRGINIA POWER</u>			
BREMO 1	1931	1972	41
BREMO 2	1931	1972	41
REEVES AVENUE 6	1941	1975	34
REEVES AVENUE 7	1951	1975	24
<u>DUKE ENERGY CAROLINAS LLC</u>			
BUCK (NC) 1	1926	1979	53
BUCK (NC) 2	1926	1979	53
BUZZARD ROOST 5	1948	1974	26
RIVERBEND (NC) 1	1929	1979	50
RIVERBEND (NC) 2	1929	1979	50
RIVERBEND (NC) 3	1938	1976	38
TIGER 1	1924	1974	50
TIGER 2	1924	1974	50
<u>DUKE ENERGY INDIANA INC</u>			
DRESSER 1	1924	1971	47
DRESSER 2	1924	1971	47
DRESSER 3	1925	1971	46
DRESSER 4	1943	1975	32
DRESSER 5	1944	1975	31
DRESSER 6	1945	1975	30
<u>DUKE ENERGY OHIO INC</u>			
MIAMI FORT 3	1938	1982	44
MIAMI FORT 4	1942	1982	40
WEST END 1	1918	1976	58
WEST END 2	1918	1976	58
WEST END 3	1920	1976	56
WEST END 4	1921	1976	55
WEST END 5	1939	1976	37
WEST END 6	1948	1976	28
<u>DUQUESNE LIGHT CO</u>			
COLFAX (PA) 1	1922	1973	51
COLFAX (PA) 2	1922	1973	51
COLFAX (PA) 3	1925	1973	48
COLFAX (PA) 4	1927	1973	46
JH REED 1	1930	1975	45
JH REED 2	1938	1975	37
JH REED 3	1941	1973	32
<u>EMPIRE DISTRICT ELEC CO</u>			
RIVERTON 1	1910	1977	67
RIVERTON 2	1910	1974	64
<u>EXELON POWER</u>			
BARBADOES 3	1949	1978	29
BARBADOES 4	1949	1978	29
CHESTER 1	1918	1973	55
CHESTER 2	1918	1975	57
CHESTER 3	1924	1975	51
CHESTER 4	1924	1975	51
L STREET 03	1908	1970	62
L STREET 06	1911	1971	60
L STREET 08	1914	1970	56
RICHMOND (PA) 12	1935	1980	45
RICHMOND (PA) A	1926	1975	49

Florida Power & Light Company
 Life Spans of Retired US Coal Generating Units, 10 MW or Greater

<u>Unit</u> (1)	<u>Installation Year</u> (2)	<u>Retirement Year</u> (3)	<u>Life Span</u> (4)
<u>FIRSTENERGY GENERATION CORP</u>			
ACME 2	1951	2000	49
ACME 3	1923	1971	48
ACME 5	1941	1992	51
ACME 6	1949	1992	43
ASHTABULA 7	1949	2003	54
ASHTABULA 8	1948	2003	55
ASHTABULA 9	1948	2003	55
EDGEWATER (OH) 3	1949	1993	44
GORGE (OH) 6	1943	1991	48
GORGE (OH) 7	1948	1991	43
MAD RIVER 1	1927	1980	53
MAD RIVER 2	1938	1985	47
MAD RIVER 3	1949	1985	36
NORWALK (OH) 5	1969	1981	12
RE BURGER 1	1944	1995	51
RE BURGER 2	1947	1995	48
TORONTO (OH) 1	1925	1971	46
TORONTO (OH) 2	1925	1971	46
TORONTO (OH) 3	1927	1971	44
TORONTO (OH) 4	1928	1971	43
TORONTO (OH) 5	1940	1993	53
TORONTO (OH) 6	1949	1993	44
TORONTO (OH) 7	1949	1993	44
<u>FORT WAYNE ELECTRIC</u>			
LAWTON PARK 2	1934	1975	41
LAWTON PARK 3	1941	1975	34
<u>FRANKFORT CITY LIGHT & POWER</u>			
FRANKFORT 3	1952	1978	26
FRANKFORT 4	1964	1978	14
<u>FREMONT DEPT OF UTILITIES</u>			
LD WRIGHT 5	1950	1976	26
<u>GEORGIA POWER CO</u>			
ARKWRIGHT 1	1941	2002	61
ARKWRIGHT 2	1942	2002	60
ARKWRIGHT 3	1943	2002	59
ARKWRIGHT 4	1948	2002	54
MITCHELL (GA) 1	1948	2002	54
MITCHELL (GA) 2	1949	2002	53
<u>GRAND HAVEN BO LT & PWR</u>			
JB SIMS 1	1961	1986	25
JB SIMS 2	1961	1986	25
<u>HAGERSTOWN LIGHT DEPT (MD)</u>			
HAGERSTOWN 1	1957	1992	35
HAGERSTOWN 2	1960	1992	32
<u>HAMILTON MUNICIPAL UTILITIES</u>			
HAMILTON (OH) 4	1938	1986	48
HAMILTON (OH) 6	1960	1976	16
<u>INDIANA MICHIGAN POWER CO</u>			
BREED 1	1960	1994	34
TWIN BRANCH 1	1925	1974	49
TWIN BRANCH 2	1925	1974	49
TWIN BRANCH 3HP	1941	1974	33
TWIN BRANCH 3LP	1940	1974	34
<u>INDIANAPOLIS POWER & LIGHT CO</u>			
PERRY (IN) 7	1966	1997	31

Florida Power & Light Company
 Life Spans of Retired US Coal Generating Units, 10 MW or Greater

Unit (1)	Installation Year (2)	Retirement Year (3)	Life Span (4)
<u>INTERSTATE POWER AND LIGHT CO</u>			
BOONE (IA) 1	1946	1986	40
BOONE (IA) 2	1953	1986	33
BRIDGEPORT (IA) 1	1953	1982	29
BRIDGEPORT (IA) 2	1953	1982	29
BRIDGEPORT (IA) 3	1957	1982	25
DUBUQUE 1	1926	1974	48
LANSING 1	1948	2004	56
SIXTH STREET (IA) 6	1925	2008	83
SIXTH STREET (IA) 7	1945	2008	63
SIXTH STREET (IA) 8	1950	2008	58
<u>JAMESTOWN BD OF PUB UTIL</u>			
CARLSON 4	1930	1978	48
<u>KANSAS CITY BD PUB UTIL</u>			
QUINDARO TWO 6	1932	1971	39
<u>KANSAS CITY POWER & LIGHT CO</u>			
GRAND AVENUE 5	1929	1997	68
GRAND AVENUE 8	1936	1982	46
HAWTHORN 1	1951	1984	33
HAWTHORN 2	1951	1984	33
HAWTHORN 3	1953	1984	31
NORTHEAST (MO) 3	1929	1982	53
NORTHEAST (MO) 6	1940	1982	42
<u>KENTUCKY UTILITIES CO</u>			
GREEN RIVER (KY) 1	1950	2004	54
GREEN RIVER (KY) 2	1950	2004	54
KU PARK 3	1951	2002	51
<u>KEYSPAN GENERATION LLC</u>			
GLENWOOD (NY) 2	1930	1978	48
GLENWOOD (NY) 3	1938	1978	40
<u>KINSTON DEPT OF PUBLIC SVCS</u>			
KINSTON 4	1956	1970	14
<u>LANSDALE BOROUGH UTILITIES</u>			
LANSDALE 4	1959	1972	13
<u>LANSING BD WATER & LIGHT</u>			
OTTAWA STREET 1	1940	1982	42
OTTAWA STREET 2	1949	1990	41
OTTAWA STREET 3	1951	1990	39
<u>LOUISVILLE GAS & ELEC CO (KY)</u>			
CANAL (KY) 3	1937	1974	37
CANAL (KY) 4	1941	1974	33
CANE RUN 1	1954	1985	31
CANE RUN 2	1956	1985	29
PADDYS RUN 1	1942	1979	37
PADDYS RUN 2	1942	1979	37
PADDYS RUN 5	1950	1984	34
PADDYS RUN 6	1952	1984	32
<u>MANITOWOC PUBLIC UTILITIES</u>			
MANITOWOC 7	1964	1970	6
<u>MARSHFIELD ELEC & WATER</u>			
WILDWOOD 4	1962	1994	32
WILDWOOD 5	1968	1994	26
<u>MASSACHUSETTS ELEC CO</u>			
WEBSTER STREET 8	1950	1972	22

Florida Power & Light Company
 Life Spans of Retired US Coal Generating Units, 10 MW or Greater

<u>Unit</u> (1)	<u>Installation Year</u> (2)	<u>Retirement Year</u> (3)	<u>Life Span</u> (4)
<u>METROPOLITAN EDISON CO</u>			
CRAWFORD (PA) 3	1947	1978	31
EYLER 4	1919	1971	52
<u>MIDAMERICAN ENERGY CO</u>			
DES MOINES 01	1925	1975	50
DES MOINES 02	1926	1975	49
DES MOINES 03	1938	1982	44
DES MOINES 10	1954	1986	32
DES MOINES 11	1964	1986	22
HAWKEYE 2	1954	1981	27
MAYNARD 4	1938	1976	38
MAYNARD 5	1947	1976	29
MOLINE 3	1913	1983	70
MOLINE 4	1913	1974	61
RIVERSIDE (IA) 1	1925	1983	58
RIVERSIDE (IA) 2	1929	1972	43
RIVERSIDE (IA) 4	1949	1988	39
<u>MIDWEST GENERATION EME LLC</u>			
CALUMET 7	1947	1975	28
FISK 18	1949	1978	29
POWERTON 1	1927	1974	47
POWERTON 2	1929	1974	45
POWERTON 3	1930	1974	44
POWERTON 4	1940	1974	34
SABROOKE 3	1955	1976	21
SABROOKE 4	1961	1976	15
<u>MINNKOTA POWER COOP INC</u>			
FP WOOD 3	1951	1985	34
<u>MIRANT CORP</u>			
LOVETT 4	1966	2007	41
LOVETT 5	1969	2008	39
<u>MONONGAHELA POWER CO</u>			
RIVESVILLE 1	1919	1973	54
RIVESVILLE 2	1921	1973	52
RIVESVILLE 3	1921	1973	52
RIVESVILLE 4	1937	1973	36
<u>MOORHEAD PUB SER</u>			
MOORHEAD 7	1970	1999	29
<u>MUSCATINE POWER & WATER</u>			
MUSCATINE 6	1946	1985	39
<u>NATIONAL ENERGY & GAS TRANSM</u>			
LYNNWAY 1	1921	1972	51
LYNNWAY 2	1942	1972	30
LYNNWAY 6	1945	1972	27
SOUTH STREET 07	1921	1970	49
SOUTH STREET 08	1926	1974	48
<u>NEBRASKA PUBLIC POWER DIST</u>			
KRAMER 1	1949	1987	38
KRAMER 2	1949	1987	38
KRAMER 3	1951	1987	36
<u>NO INDIANA PUBLIC SERVICE CO</u>			
MICHIGAN CITY 01	1930	1978	48

Florida Power & Light Company
 Life Spans of Retired US Coal Generating Units, 10 MW or Greater

<u>Unit</u> (1)	<u>Installation Year</u> (2)	<u>Retirement Year</u> (3)	<u>Life Span</u> (4)
<u>NORTHERN STATES POWER CO (MN)</u>			
HIGH BRIDGE 1	1924	1974	50
HIGH BRIDGE 2	1928	1974	46
HIGH BRIDGE 3	1942	1989	47
LAWRENCE (SD) 1	1948	1977	29
LAWRENCE (SD) 2	1949	1977	28
LAWRENCE (SD) 3	1951	1977	26
MINNESOTA VALLEY 1	1930	1972	42
MINNESOTA VALLEY 2	1930	1972	42
RIVERSIDE (MN) 1	1938	1987	49
RIVERSIDE (MN) 2	1931	1987	56
RIVERSIDE (MN) 6	1949	1987	38
RIVERSIDE (MN) 7A	1950	1971	21
WHITNEY (MN) 2	1948	1974	26
WINONA 3	1951	1974	23
<u>NRG ENERGY INC</u>			
DEVON 1	1924	1977	53
HUNTLEY 63	1942	2006	64
HUNTLEY 64	1948	2006	58
MONTVILLE 1	1948	1978	30
MONTVILLE 2	1948	1978	30
MONTVILLE 3	1924	1971	47
SOMERSET (MA) 3	1942	1994	52
<u>OHIO POWER CO</u>			
PHILO 1	1925	1974	49
PHILO 2	1925	1974	49
PHILO 3	1928	1974	46
PHILO 3-1	1929	1974	45
PHILO 3-2	1929	1974	45
PHILO 3-3	1929	1974	45
PHILO 4	1942	1979	37
PHILO 4HP	1942	1979	37
PHILO 4LP	1941	1979	38
PHILO 5HP	1942	1979	37
PHILO 5LP	1942	1979	37
PHILO 6	1957	1979	22
TIDD 1	1945	1979	34
TIDD 2	1948	1979	31
WOODCOCK 4	1947	1979	32
WOODCOCK 5	1950	1979	29
<u>OTTER TAIL POWER CO</u>			
KIDDER 4	1939	1975	36
ORTONVILLE 1	1950	1988	38
<u>OWENSBORO MUNICIPAL UTIL</u>			
OWENSBORO 4	1954	1978	24
<u>PACIFICORP</u>			
HALE (UT) 1	1936	1979	43
JORDAN 3	1925	1985	60
<u>PAINESVILLE MUNI UTIL SYS</u>			
PAINESVILLE 6	1976	1989	13
<u>PENNSYLVANIA ELEC CO</u>			
FRONT STREET 1	1952	1991	39
FRONT STREET 2	1952	1991	39
FRONT STREET 3	1928	1991	63
FRONT STREET 4	1942	1991	49
FRONT STREET 5	1942	1991	49
SAXTON 1	1923	1974	51
SAXTON 2	1923	1974	51
SAXTON 3	1926	1974	48

Florida Power & Light Company
 Life Spans of Retired US Coal Generating Units, 10 MW or Greater

Unit (1)	Installation Year (2)	Retirement Year (3)	Life Span (4)
<u>PEPCO ENERGY SERVICES INC</u>			
BENNING 04	1922	1972	50
BENNING 05	1923	1972	49
BENNING 06	1917	1972	55
BENNING 07	1918	1972	54
BENNING 08	1919	1972	53
BENNING 09	1924	1972	48
<u>POWERSOUTH ENERGY COOP</u>			
MCWILLIAMS 3	1959	1996	37
<u>PPL ELECTRIC UTILITIES CORP</u>			
STANTON (PA) 1	1927	1972	45
STANTON (PA) 2	1927	1972	45
STANTON (PA) 3	1953	1972	19
<u>PPL GENERATION LLC</u>			
PPL HOLTWOOD 15	1925	1972	47
PPL HOLTWOOD 16	1925	1972	47
PPL HOLTWOOD 17	1954	1999	45
PPL MARTINS CREEK 1	1954	2007	53
PPL MARTINS CREEK 2	1956	2007	51
<u>PROGRESS ENERGY CAROLINAS</u>			
CAPE FEAR 3	1942	1994	52
CAPE FEAR 4	1943	1994	51
<u>PSEG FOSSIL LLC</u>			
BURLINGTON (NJ) 1	1915	1974	59
BURLINGTON (NJ) 2	1919	1974	55
BURLINGTON (NJ) 3	1922	1974	52
BURLINGTON (NJ) 4	1933	1974	41
ESSEX 7	1938	1974	36
KEARNY (NJ) 1	1924	1974	50
KEARNY (NJ) 2	1926	1974	48
KEARNY (NJ) 3	1925	1974	49
KEARNY (NJ) 4	1926	1974	48
KEARNY (NJ) 5	1926	1974	48
KEARNY (NJ) 6	1932	1974	42
KEARNY (NJ) A	1933	1974	41
<u>PUBLIC SERVICE CO OF OKLAHOMA</u>			
TULSA 1	1947	1978	31
<u>PUBLIC SERVICE COLORADO</u>			
ARAPAHOE 1	1950	2003	53
ARAPAHOE 2	1951	2003	52
<u>PUBLIC SVC CO OF NEW HAMPSHIRE</u>			
SCHILLER 4	1952	2006	54
SCHILLER 5	1955	2005	50
<u>RICHMOND POWER & LIGHT</u>			
JOHNSON STREET 3	1934	1970	36
<u>ROCHESTER GAS & ELEC CORP (NY)</u>			
BEEBEE 04	1916	1971	55
BEEBEE 12	1959	1999	40

Florida Power & Light Company
 Life Spans of Retired US Coal Generating Units, 10 MW or Greater

<u>Unit</u> (1)	<u>Installation Year</u> (2)	<u>Retirement Year</u> (3)	<u>Life Span</u> (4)
<u>RRI ENERGY INC</u>			
AVON LAKE 8	1959	1987	28
NEW CASTLE 1	1939	1993	54
NEW CASTLE 2	1947	1993	46
SEWARD 2	1921	1980	59
SEWARD 3	1941	1979	38
SEWARD 4	1950	2003	53
SEWARD 5	1957	2003	46
WERNER 1	1930	1982	52
WERNER 2	1930	1982	52
WILLIAMSBURG 5	1944	1991	47
<u>SE TECHNOLOGIES INC</u>			
MARION (NJ) 10	1942	1974	32
MARION (NJ) 7	1920	1974	54
MARION (NJ) 8	1924	1974	50
MARION (NJ) 9	1941	1974	33
<u>SMURFIT-STONE CONTAINER CORP</u>			
ALTON CONTAINERBOARD 5	1958	1998	40
<u>SOLID WASTE AUTH CENTRAL OHIO</u>			
COLUMBUS WTE 1	1983	1995	12
COLUMBUS WTE 2	1983	1995	12
<u>SOUTH CAROLINA ELEC & GAS CO</u>			
PARR 1	1925	1973	48
PARR 2	1926	1973	47
PARR 3	1929	1973	44
<u>SOUTHERN CALIF EDISON CO</u>			
MOHAVE 1	1970	2006	36
MOHAVE 2	1971	2006	35
<u>TAMPA ELECTRIC CO</u>			
BAYSIDE (FL) GANNON 1	1957	2003	46
BAYSIDE (FL) GANNON 2	1958	2003	45
BAYSIDE (FL) GANNON 3	1960	2003	43
BAYSIDE (FL) GANNON 4	1963	2003	40
BAYSIDE (FL) GANNON 5	1965	2003	38
BAYSIDE (FL) GANNON 6	1967	2003	36
<u>TAUNTON MUNI LIGHT CO</u>			
WATER STREET 2	1917	1971	54
<u>TRAVERSE CITY LT & POWER</u>			
BAYSIDE (MI) 4	1968	2002	34
<u>UGI DEVELOPMENT CO</u>			
HUNLOCK CREEK 1	1925	1975	50
HUNLOCK CREEK 2	1947	1975	28
<u>US POWER GENERATING CO LLC</u>			
MYSTIC 1	1944	1975	31
MYSTIC 2	1945	1975	30
MYSTIC 3	1946	1975	29
<u>VECTREN ENERGY INDIANA SOUTH</u>			
FB CULLEY 1	1955	2006	51

Florida Power & Light Company
 Life Spans of Retired US Coal Generating Units, 10 MW or Greater

<u>Unit</u> (1)	<u>Installation Year</u> (2)	<u>Retirement Year</u> (3)	<u>Life Span</u> (4)
<u>WE ENERGIES</u>			
EAST WELLS B1	1939	1982	43
OAK CREEK (WI) 1	1953	1989	36
OAK CREEK (WI) 2	1954	1989	35
OAK CREEK (WI) 3	1955	1988	33
OAK CREEK (WI) 4	1957	1988	31
PORT WASHINGTON 1	1935	2002	67
PORT WASHINGTON 2	1943	2002	59
PORT WASHINGTON 3	1948	2002	54
PORT WASHINGTON 5	1950	1991	41
PRESQUE ISLE 1	1955	2006	51
PRESQUE ISLE 2	1962	2007	45
<u>WESTAR ENERGY INC</u>			
NEOSHO 1	1924	1985	61
NEOSHO 2	1928	1985	57
<u>WESTERN MASSACHUSETTS ELECTRIC</u>			
STATE STREET 1	1917	1971	54
STATE STREET 4	1921	1971	50
<u>WISCONSIN POWER & LIGHT CO</u>			
EDGEWATER (WI) 1	1931	1985	54
EDGEWATER (WI) 2	1942	1985	43
<u>WISCONSIN PUBLIC SERVICE CORP</u>			
JP PULLIAM 2	1927	1980	53
<u>WOLVERINE POWER COOP INC</u>			
ADVANCE 3	1967	2000	33
<u>WYANDOTTE MUNI SERVICES</u>			
WYANDOTTE NORTH 5	1948	1977	29
WYANDOTTE NORTH 9	1968	1977	9
TOTAL LIFE SPAN YEARS			19,789
TOTAL NUMBER OF UNITS			+
AVERAGE LIFE SPAN, YEARS			<u>42.65</u>

Source: Platts World Electric Power Plants Database, Jun 2009

Florida Power & Light Company
 Life Spans of Retired US Oil and Gas Steam Generating Units, 10 MW or Greater

<u>Unit</u> (1)	<u>Installation Year</u> (2)	<u>Retirement Year</u> (3)	<u>Life Span</u> (4)
<u>AEP TEXAS NORTH CO</u>			
ABILENE (TX) 4	1949	2005	56
CONCHO 3	1930	1990	60
CONCHO 4	1953	1988	35
PAINT CREEK 1	1953	2005	52
PAINT CREEK 2	1954	2005	51
PAINT CREEK 3	1959	2005	46
PAINT CREEK 4	1971	2005	34
<u>AES CORP</u>			
RIVERSIDE CANAL 1	1952	2002	50
RIVERSIDE CANAL 2	1952	2002	50
RIVERSIDE CANAL 3	1953	2002	49
RIVERSIDE CANAL 4	1955	2002	47
<u>ALABAMA POWER CO</u>			
CHICKASAW 1	1941	1979	38
CHICKASAW 2	1943	1979	36
CHICKASAW 3	1951	1999	48
<u>ALEXANDRIA MUNI UTILS (LA)</u>			
DG HUNTER 1	1957	2005	48
DG HUNTER 2	1957	2005	48
<u>ALLEGHENY ENERGY SUPPLY CO LLC</u>			
MILESBURG 1	1950	1984	34
MILESBURG 2	1950	1984	34
MITCHELL (PA) 1	1948	2002	54
<u>AMERENCILCO</u>			
KEYSTONE (IL) 4	1967	1975	8
KEYSTONE (IL) 5	1949	1975	26
KEYSTONE (IL) 6	1956	1975	19
<u>AMERENERGY GENERATING CO</u>			
HUTSONVILLE 1	1940	1982	42
HUTSONVILLE 2	1941	1982	41
<u>AMERENUE</u>			
MOUND STREET 6	1940	1971	31
VENICE-1 NO 1	1924	1973	49
VENICE-1 NO 2	1929	1973	44
VENICE-2 NO 1	1942	2000	58
VENICE-2 NO 2	1942	2000	58
VENICE-2 NO 3	1943	2002	59
VENICE-2 NO 4	1948	2002	54
VENICE-2 NO 5	1950	2002	52
VENICE-2 NO 6	1950	2002	52
<u>ARIZONA PUBLIC SERVICE CO</u>			
WEST PHOENIX 4	1948	2002	54
WEST PHOENIX 5	1949	2002	53
WEST PHOENIX 6	1950	2002	52
<u>ATLANTIC CITY ELECTRIC CO (NJ)</u>			
GREENWICH ACE 1	1953	1975	22

Florida Power & Light Company
 Life Spans of Retired US Oil and Gas Steam Generating Units, 10 MW or Greater

<u>Unit</u> (1)	<u>Installation Year</u> (2)	<u>Retirement Year</u> (3)	<u>Life Span</u> (4)
<u>AUSTIN ENERGY</u>			
HOLLY STREET 1	1960	2004	44
HOLLY STREET 2	1964	2004	40
HOLLY STREET 3	1966	2007	41
HOLLY STREET 4	1974	2007	33
SEAHOLM 5	1951	1994	43
SEAHOLM 6	1951	1994	43
SEAHOLM 7	1955	1994	39
SEAHOLM 8	1955	1994	39
SEAHOLM 9	1958	1994	36
<u>BANGOR HYDRO-ELEC CO</u>			
EM GRAHAM 3	1954	1992	38
<u>BHP MINERALS INTERNATIONAL</u>			
SAN MANUEL SMELTER	1954	2005	51
<u>BIOFUELS POWER CORP</u>			
HIRAM O CLARKE 1	1943	1985	42
HIRAM O CLARKE 2	1947	1985	38
HIRAM O CLARKE 3	1950	1985	35
HIRAM O CLARKE 4	1951	1985	34
<u>BOSTON EDISON CO</u>			
EDGAR 1	1927	1971	44
EDGAR 2	1925	1971	46
EDGAR 3	1927	1978	51
EDGAR 4	1949	1978	29
EDGAR 5	1952	1978	26
EDGAR 6	1954	1978	24
<u>BRAINTREE ELEC LIGHT DEPT</u>			
POTTER 1	1959	2003	44
<u>BRAZOS ELECTRIC COOP INC</u>			
WR POAGE 1	1950	1990	40
WR POAGE 2	1952	1990	38
<u>BROCKTON EDISON CO</u>			
EAST BRIDGEWATER 3	1917	1973	56
<u>BURBANK WATER AND POWER</u>			
MAGNOLIA 1	1941	1983	42
MAGNOLIA 3	1949	2002	53
MAGNOLIA 4	1953	2002	49
<u>CLECO MIDSTREAM RESOURCES LLC</u>			
EVANGELINE 3	1949	1984	35
EVANGELINE 4	1952	1984	32
EVANGELINE 5	1958	1998	40
<u>COFFEYVILLE MUNI LIGHT & POWER</u>			
COFFEYVILLE 5	1949	1992	43
<u>COMMONWEALTH EDISON CO</u>			
RIDGELAND 1	1951	1982	31
RIDGELAND 2	1950	1982	32
RIDGELAND 3	1953	1982	29
RIDGELAND 4	1955	1982	27
<u>COMMONWEALTH ELECTRIC CO</u>			
CANNON STREET 1	1947	1993	46
CANNON STREET 2	1950	1993	43
CANNON STREET 4	1917	1973	56
CANNON STREET 8	1923	1971	48

Florida Power & Light Company
 Life Spans of Retired US Oil and Gas Steam Generating Units, 10 MW or Greater

<u>Unit</u> (1)	<u>Installation Year</u> (2)	<u>Retirement Year</u> (3)	<u>Life Span</u> (4)
<u>CON EDISON CO OF NY INC</u>			
59TH STREET 07	1918	1977	59
59TH STREET 08	1918	1977	59
59TH STREET 13	1952	1990	38
59TH STREET 14	1962	1994	32
74TH STREET 03	1915	1982	67
74TH STREET 04	1918	1972	54
74TH STREET 10	1956	1992	36
EAST RIVER 5	1951	1996	45
HELL GATE CECO 2	1921	1974	53
HELL GATE CECO 3	1921	1974	53
HELL GATE CECO 4	1922	1972	50
HELL GATE CECO 5	1923	1974	51
HELL GATE CECO 6	1925	1971	46
HELL GATE CECO 7	1928	1971	43
HELL GATE CECO 8	1928	1972	44
HELL GATE CECO 9	1929	1974	45
HUDSON AVENUE 01	1924	1972	48
HUDSON AVENUE 02	1924	1979	55
HUDSON AVENUE 03	1924	1979	55
HUDSON AVENUE 04	1926	1970	44
HUDSON AVENUE 05	1928	1981	53
HUDSON AVENUE 06	1928	1981	53
HUDSON AVENUE 08	1932	1986	54
WATERSIDE (NY) 01	1891	1972	81
WATERSIDE (NY) 04	1937	1994	57
WATERSIDE (NY) 05	1938	1995	57
WATERSIDE (NY) 06	1941	2005	64
WATERSIDE (NY) 07	1941	1992	51
WATERSIDE (NY) 09	1949	2005	56
WATERSIDE (NY) 10	1924	1976	52
WATERSIDE (NY) 11	1919	1977	58
WATERSIDE (NY) 12	1924	1976	52
WATERSIDE (NY) 13	1919	1977	58
WATERSIDE (NY) 14	1948	1992	44
WATERSIDE (NY) 15	1949	1992	43
<u>CONNECTV ENERGY</u>			
DEEPWATER (NJ) 3	1930	1991	61
<u>CONNECTICUT LIGHT AND POWER CO</u>			
STAMFORD 7	1928	1978	50
STAMFORD 8	1941	1978	37
<u>CONSTELLATION ENERGY POWER GEN</u>			
RIVERSIDE (MD) 1	1942	1991	49
RIVERSIDE (MD) 2	1944	1994	50
RIVERSIDE (MD) 3	1948	1994	46
RIVERSIDE (MD) 5	1953	1994	41
WESTPORT 01	1940	1984	44
WESTPORT 03	1941	1994	53
WESTPORT 04	1950	1994	44
WESTPORT 13	1942	1984	42
WESTPORT 14	1942	1984	42
<u>CONSUMERS ENERGY CO (MI)</u>			
BE MORROW 1	1939	1982	43
BE MORROW 2	1939	1982	43
BE MORROW 3	1941	1982	41
BE MORROW 4	1949	1982	33
JC WEADOCK 1	1940	1983	43
JC WEADOCK 2	1941	1983	42
JC WEADOCK 3	1943	1983	40
JC WEADOCK 4	1948	1983	35
JC WEADOCK 5	1949	1983	34
JC WEADOCK 6	1949	1983	34

Florida Power & Light Company
 Life Spans of Retired US Oil and Gas Steam Generating Units, 10 MW or Greater

Unit (1)	Installation Year (2)	Retirement Year (3)	Life Span (4)
<u>CPS ENERGY</u>			
LEON CREEK 1	1949	1988	39
LEON CREEK 2	1951	1988	37
MISSION ROAD 1	1945	1977	32
MISSION ROAD 2	1948	1977	29
MISSION ROAD 3	1958	2003	45
<u>DAIRYLAND POWER COOP</u>			
GENOA-1 NO 1	1941	1987	46
<u>DAYTON POWER & LIGHT CO (OH)</u>			
FM TAIT 1	1944	1987	43
FM TAIT 2	1942	1987	45
FM TAIT 3	1951	1987	36
FM TAIT 7	1937	1987	50
FM TAIT 8	1940	1987	47
<u>DETROIT EDISON CO</u>			
CONNERS CREEK 10	1935	1983	48
CONNERS CREEK 12	1939	1983	44
CONNERS CREEK 13	1937	1983	46
CONNERS CREEK 14	1936	1983	47
DELRAY 11	1929	1983	54
DELRAY 12	1929	1983	54
DELRAY 13	1933	1983	50
DELRAY 14	1938	1988	50
DELRAY 15	1940	1988	48
DELRAY 16	1942	1983	41
FERMI FOSSIL 1	1966	1983	17
TRENTON CHANNEL 4	1928	1974	46
<u>DETROIT PUBLIC LIGHTING</u>			
MISTERSKY 1	1927	1977	50
MISTERSKY 2	1927	1977	50
MISTERSKY 3	1927	1977	50
MISTERSKY 4	1927	1977	50
<u>DOMINION VIRGINIA POWER</u>			
CHESTERFIELD 1	1944	1981	37
CHESTERFIELD 2	1949	1981	32
POSSUM POINT 1	1948	2003	55
POSSUM POINT 2	1951	2003	52
TWELFTH STREET 4	1923	1975	52
TWELFTH STREET 5	1919	1975	56
TWELFTH STREET 6	1936	1975	39
TWELFTH STREET 7	1940	1975	35

Florida Power & Light Company
Life Spans of Retired US Oil and Gas Steam Generating Units, 10 MW or Greater

<u>Unit</u> (1)	<u>Installation Year</u> (2)	<u>Retirement Year</u> (3)	<u>Life Span</u> (4)
<u>DUKE ENERGY CAROLINAS LLC</u>			
GREENWOOD (SC) 1	1956	1974	18
<u>DYNEGY GENERATION</u>			
MOSS LANDING 1	1950	1994	44
MOSS LANDING 2	1950	1994	44
MOSS LANDING 3	1951	1994	43
MOSS LANDING 4	1952	1994	42
MOSS LANDING 5	1952	1994	42
<u>EAGLE CONSTR & ENV SVCS</u>			
FORT PHANTOM 1	1974	2007	33
FORT PHANTOM 2	1977	2007	30
LAKE PAULINE 1	1928	2005	77
LAKE PAULINE 2	1951	2005	54
OAK CREEK (TX) 1	1962	2005	43
RIO PECOS ST 6	1959	2005	46
<u>EL PASO ELECTRIC CO</u>			
RIO GRANDE 1	1929	1980	51
RIO GRANDE 2	1929	1980	51
RIO GRANDE 3	1946	1985	39
RIO GRANDE 4	1951	1985	34
RIO GRANDE 5	1954	1985	31
<u>EMPIRE DISTRICT ELEC CO</u>			
RIVERTON 3	1918	1990	72
RIVERTON 4	1926	1990	64
RIVERTON 6	1939	1995	56
<u>ENTERGY ARKANSAS INC</u>			
JIM HILL 1	1950	1984	34
<u>ENTERGY GULF STATES LOUISIANA</u>			
LOUISIANA ONE 3	1930	1986	56
LOUISIANA ONE 4	1938	1989	51
NECHES 3	1937	1987	50
NECHES 7	1956	1983	27
<u>ENTERGY LOUISIANA LLC</u>			
STERLINGTON 3	1929	1972	43
STERLINGTON 4	1929	1972	43
STERLINGTON 5	1943	1985	42
<u>ENTERGY MISSISSIPPI INC</u>			
REX BROWN 2	1949	1984	35
<u>ENTERGY NEW ORLEANS INC</u>			
MARKET STREET 11	1938	1984	46
MARKET STREET 12	1943	1984	41
MARKET STREET 13	1952	1984	32

Florida Power & Light Company
 Life Spans of Retired US Oil and Gas Steam Generating Units, 10 MW or Greater

<u>Unit</u> (1)	<u>Installation Year</u> (2)	<u>Retirement Year</u> (3)	<u>Life Span</u> (4)
<u>EXELON POWER</u>			
BARBADOES 1	1923	1973	50
CHESTER 5	1940	1981	41
CHESTER 6	1941	1982	41
DELAWARE 3	1920	1975	55
DELAWARE 4	1924	1975	51
DELAWARE 5	1924	1975	51
DELAWARE 6	1924	1971	47
DELAWARE 7	1953	2004	51
DELAWARE 8	1953	2004	51
L STREET 09	1919	1972	53
L STREET 10	1920	1973	53
L STREET 11	1922	1973	51
L STREET 12	1939	1980	41
L STREET TOP	1939	1976	37
MOUNTAIN CREEK 1	1938	1977	39
MOUNTAIN CREEK 4	1949	1970	21
MOUNTAIN CREEK 5	1950	1970	20
NEW BOSTON 2	1967	2003	36
RICHMOND (PA) 10	1925	1975	50
RICHMOND (PA) 11	1926	1975	49
RICHMOND (PA) 9	1950	1985	35
SCHUYLKILL 3	1938	1987	49
SCHUYLKILL 5	1913	1975	62
SCHUYLKILL 8	1913	1975	62
SCHUYLKILL 9	1916	1981	65
SOUTHWARK 1	1947	1985	38
SOUTHWARK 2	1948	1985	37
<u>FIRSTENERGY GENERATION CORP</u>			
ACME 1	1918	1989	71
ACME 4	1929	1989	60
ASHTABULA 1	1930	1983	53
ASHTABULA 2	1930	1983	53
ASHTABULA 3	1930	1983	53
ASHTABULA 4	1930	1983	53
EDGEWATER (OH) 4	1957	2002	45
LAKE SHORE 14	1941	1992	51
LAKE SHORE 15	1942	1992	50
LAKE SHORE 16	1951	1992	41
LAKE SHORE 17	1951	1992	41
<u>FIRSTLIGHT POWER RESOURCES INC</u>			
SOUTH MEADOW 1	1921	1976	55
SOUTH MEADOW 2	1923	1976	53
SOUTH MEADOW 3	1929	1976	47
SOUTH MEADOW 4	1938	1976	38
SOUTH MEADOW 5	1942	1976	34
SOUTH MEADOW 6	1950	1976	26
<u>FITCHBURG GAS AND ELECT CO</u>			
SAWYER PASSWAY 6	1965	1978	13
<u>FLORIDA POWER & LIGHT CO</u>			
CUTLER (FL) 3	1949	1975	26
CUTLER (FL) 4	1952	1980	28
FORT MYERS 1	1958	2002	44
FORT MYERS 2	1969	2002	33
MIAMI 8	1948	1975	27
PALATKA 1	1951	1983	32
PALATKA 2	1956	1983	27
RIVIERA BEACH 1	1946	1983	37
<u>FORT PIERCE UTILS AUTH</u>			
HD KING 6	1958	2008	50
HD KING 7	1964	2008	44
HD KING 8	1976	2008	32

Florida Power & Light Company
 Life Spans of Retired US Oil and Gas Steam Generating Units, 10 MW or Greater

<u>Unit</u> (1)	<u>Installation Year</u> (2)	<u>Retirement Year</u> (3)	<u>Life Span</u> (4)
<u>GAINESVILLE REGIONAL UTIL</u>			
JR KELLY 5	1955	1976	21
<u>GEORGIA POWER CO</u>			
ATKINSON 1	1930	1993	63
ATKINSON 2	1941	2002	61
ATKINSON 3	1945	2002	57
ATKINSON 4	1948	2002	54
RIVERSIDE (GA) 4	1926	2005	79
RIVERSIDE (GA) 6	1949	2005	56
RIVERSIDE (GA) 7	1954	2005	51
RIVERSIDE (GA) 8	1956	2005	49
<u>GRAND RIVER DAM AUTH</u>			
CHOUTEAU STEAM 5	1950	1982	32
CHOUTEAU STEAM 6	1951	1982	31
<u>HAWAIIAN ELECTRIC CO INC</u>			
HONOLULU 5	1930	1982	52
HONOLULU 7	1944	1983	39
WAI'AU 2	1940	1982	42
<u>HOLYOKE GAS & ELECTRIC (MA)</u>			
RIVERSIDE (MA) 02	1936	1977	41
RIVERSIDE (MA) 10	1948	1977	29
<u>INDIANA MICHIGAN POWER CO</u>			
TWIN BRANCH 4	1944	1981	37
TWIN BRANCH 5	1949	1981	32
<u>INDIANAPOLIS POWER & LIGHT CO</u>			
HARDING STREET 1	1931	1986	55
HARDING STREET 2	1931	1986	55
<u>INTERSTATE POWER AND LIGHT CO</u>			
MASON CITY 3	1929	1977	48
<u>JEA</u>			
JD KENNEDY 05	1924	1972	48
JD KENNEDY 06	1929	1972	43
JD KENNEDY 07	1939	1972	33
JD KENNEDY 08	1955	1998	43
JD KENNEDY 09	1958	1998	40
SOUTHSIDE 3	1955	1998	43
SOUTHSIDE 4	1958	2001	43
SOUTHSIDE 5	1964	2001	37
<u>JONESBORO CITY WATER & LT</u>			
JONESBORO (AR) 6	1958	1983	25
<u>KANSAS CITY BD PUB UTIL</u>			
QUINDARO TWO 7	1938	1982	44
QUINDARO TWO 8	1947	1982	35
QUINDARO TWO 9	1952	1983	31
<u>KANSAS CITY POWER & LIGHT CO</u>			
EDMOND STREET 4	1965	1986	21
EDMOND STREET 5	1963	1986	23
EDMOND STREET 7	1950	1983	33
GRAND AVENUE 1	1949	1997	48
NORTHEAST (MO) 1	1920	1982	62
NORTHEAST (MO) 11	1950	1982	32
NORTHEAST (MO) 2	1920	1982	62

Florida Power & Light Company
 Life Spans of Retired US Oil and Gas Steam Generating Units, 10 MW or Greater

<u>Unit</u> (1)	<u>Installation Year</u> (2)	<u>Retirement Year</u> (3)	<u>Life Span</u> (4)
<u>KANSAS GAS & ELECTRIC CO</u>			
RIPLEY 1	1938	1985	47
RIPLEY 2	1948	1985	37
RIPLEY 3	1949	1985	36
WICHITA 2	1919	1986	67
<u>KCP&L GREATER MISSOURI OPER</u>			
RALPH GREEN 1	1954	1982	28
RALPH GREEN 2	1958	1982	24
<u>KEYS ENERGY SERVICES</u>			
STOCK ISLAND 3	1957	1990	33
STOCK ISLAND 4	1962	1990	28
STOCK ISLAND 5	1966	1987	21
<u>LAFAYETTE UTIL SYSTEM</u>			
CA RODEMACHER 3	1956	1994	38
CA RODEMACHER 4	1960	2001	41
<u>LAKE WORTH UTIL AUTH</u>			
TG SMITH 4	1971	2003	32
<u>LAKELAND ELECTRIC (FL)</u>			
LARSEN MEMORIAL 4	1950	1994	44
LARSEN MEMORIAL 5	1956	1992	36
<u>LINCOLN ELECTRIC SYSTEM (NE)</u>			
K STREET 3	1950	1983	33
<u>LOS ANGELES DEPT WTR & PWR</u>			
HARBOR 1	1943	1988	45
HARBOR 2	1947	1988	41
<u>LOUISVILLE GAS & ELEC CO (KY)</u>			
CANE RUN 3	1958	1995	37
<u>LOWER COLORADO RIVER AUTH</u>			
COMAL 1	1927	1973	46
COMAL 2	1929	1973	44

Florida Power & Light Company
 Life Spans of Retired US Oil and Gas Steam Generating Units, 10 MW or Greater

Unit (1)	Installation Year (2)	Retirement Year (3)	Life Span (4)
<u>LUMINANT POWER CO LLC</u>			
DALLAS 0	1930	1977	47
DALLAS 1	1924	1977	53
DALLAS 2	1927	1977	50
DALLAS 3	1954	1998	44
DALLAS 9	1951	1998	47
MORGAN CREEK 1	1950	1976	26
MORGAN CREEK 2	1950	2004	54
MORGAN CREEK 3	1952	2004	52
MORGAN CREEK 4	1954	2004	50
MORGAN CREEK 5	1959	2009	50
MORGAN CREEK 6	1966	2009	43
NORTH LAKE 1	1959	2009	50
NORTH LAKE 2	1961	2009	48
NORTH LAKE 3	1964	2009	45
NORTH MAIN (TX) 1	1919	2004	85
NORTH MAIN (TX) 2	1922	2004	82
NORTH MAIN (TX) 4	1952	2004	52
PARKDALE 1	1953	2004	51
PARKDALE 2	1955	2004	49
PARKDALE 3	1957	2004	47
PERMIAN BASIN 1	1948	1983	35
PERMIAN BASIN 2	1948	1983	35
PERMIAN BASIN 3	1949	1983	34
PERMIAN BASIN 4	1949	1983	34
PERMIAN BASIN 5	1958	2009	51
RIVER CREST 1	1954	2004	50
TRADINGHOUSE CREEK 1	1970	2009	39
TRINIDAD (TX) 1	1926	1981	55
TRINIDAD (TX) 2	1926	1981	55
TRINIDAD (TX) 3	1931	1981	50
TRINIDAD (TX) 4	1943	1981	38
TRINIDAD (TX) 5	1949	1994	45
WACO 3	1949	1972	23
WICHITA FALLS 6	1949	1980	31
WICHITA FALLS 7	1949	1980	31
<u>MADISON GAS AND ELECTRIC CO</u>			
BLOUNT STREET 1	1925	2006	81
<u>MCPHERSON BD OF PUB UTIL</u>			
MCPHERSON ONE (KS) 3	1958	1995	37
MCPHERSON TWO (KS) 1	1963	2006	43
<u>METROPOLITAN EDISON CO</u>			
CRAWFORD (PA) 1	1924	1978	54
CRAWFORD (PA) 2	1926	1978	52
EYLER 5	1919	1976	57
EYLER 6	1923	1976	53
EYLER 7	1941	1976	35
<u>MIDAMERICAN ENERGY CO</u>			
BIG SIOUX 1	1925	1975	50
BIG SIOUX 2	1925	1975	50
BIG SIOUX 3	1927	1975	48
BIG SIOUX 4	1949	1975	26
DES MOINES 09	1950	1982	32
MAYNARD 6	1951	1983	32
MAYNARD 7	1958	1988	30
MOLINE 5	1952	1985	33
MOLINE 6	1953	1986	33
MOLINE 7	1954	1986	32

Florida Power & Light Company

Life Spans of Retired US Oil and Gas Steam Generating Units, 10 MW or Greater

<u>Unit</u> (1)	<u>Installation Year</u> (2)	<u>Retirement Year</u> (3)	<u>Life Span</u> (4)
<u>MIDWEST ENERGY INC (KS)</u>			
ROSS BEACH 1	1954	1994	40
ROSS BEACH 2	1960	1994	34
<u>MIDWEST GENERATION EME LLC</u>			
COLLINS 1	1978	2004	26
COLLINS 2	1977	2004	27
COLLINS 3	1977	2004	27
COLLINS 4	1978	2004	26
COLLINS 5	1979	2004	25
CRAWFORD 6	1928	1976	48
<u>MIRANT CORP</u>			
CONTRA COSTA 1	1951	1994	43
CONTRA COSTA 2	1951	1994	43
CONTRA COSTA 3	1951	1994	43
CONTRA COSTA 4	1953	1994	41
CONTRA COSTA 5	1953	1994	41
KENDALL SQUARE 1	1949	2002	53
KENDALL SQUARE 2	1951	2002	51
KENDALL SQUARE 3	1958	2002	44
LOVETT 1	1949	1995	46
LOVETT 2	1951	1995	44
PITTSBURG 1	1954	2003	49
PITTSBURG 2	1954	2003	49
PITTSBURG 3	1954	2003	49
PITTSBURG 4	1954	2003	49
POTRERO 1	1931	1981	50
POTRERO 2	1931	1981	50
<u>MOUNTAINVIEW POWER CO LLC</u>			
MOUNTAINVIEW POWER 1	1957	2002	45
MOUNTAINVIEW POWER 2	1958	2002	44
<u>NARRAGANSETT ELECTRIC CO</u>			
PAWTUCKET ONE 5	1920	1975	55
<u>NATIONAL ENERGY & GAS TRANSM</u>			
SOUTH STREET 12	1955	1992	37
<u>NEBRASKA PUBLIC POWER DIST</u>			
BLUFFS 4	1963	1989	26
<u>NEXTERA ENERGY RESOURCES LLC</u>			
MASON 1	1942	1994	52
MASON 2	1947	1994	47
<u>NORTH AMERICAN ENERGY ALLIANCE</u>			
WEST SPRINGFIELD 1	1949	1991	42
WEST SPRINGFIELD 2	1952	1991	39
<u>NORTH AMERICAN POWER GRP</u>			
KERN 1	1948	1994	46
KERN 2	1950	1994	44
<u>NORTHERN STATES POWER CO (MN)</u>			
ISLAND 1	1924	1974	50
RIVERSIDE (MN) 3	1916	1975	59
RIVERSIDE (MN) 4	1919	1975	56
RIVERSIDE (MN) 5	1925	1975	50
SOUTHEAST 4	1946	1974	28
SOUTHEAST 5	1946	1974	28

Florida Power & Light Company
 Life Spans of Retired US Oil and Gas Steam Generating Units, 10 MW or Greater

Unit (1)	Installation Year (2)	Retirement Year (3)	Life Span (4)
<u>NRG ENERGY INC</u>			
DEVON 3	1951	1991	40
DEVON 4	1942	1991	49
DEVON 5	1947	1991	44
DEVON 6	1949	1991	42
EL SEGUNDO 1	1955	2002	47
EL SEGUNDO 2	1956	2002	46
LONG BEACH 10	1928	2005	77
LONG BEACH 11	1930	2005	75
MIDDLETOWN 1	1954	1998	44
MONTVILLE 4	1937	1977	40
OSWEGO 1	1940	1995	55
OSWEGO 2	1941	1995	54
OSWEGO 3	1948	1995	47
OSWEGO 4	1951	1995	44
SOMERSET (MA) 1	1925	1994	69
SOMERSET (MA) 2	1928	1994	66
SOMERSET (MA) 4	1947	1994	47
VIENNA 5	1948	1980	32
VIENNA 6	1949	1980	31
VIENNA 7	1951	1980	29
<u>NRG TEXAS LLC</u>			
DEEPWATER (TX) 1	1924	1986	62
DEEPWATER (TX) 2	1924	1986	62
DEEPWATER (TX) 3	1927	1986	59
DEEPWATER (TX) 4	1928	1986	58
DEEPWATER (TX) 5	1932	1986	54
DEEPWATER (TX) 6	1931	1986	55
DEEPWATER (TX) 9	1955	2005	50
GABLE STREET 3	1922	1971	49
GABLE STREET 6	1939	1983	44
GABLE STREET 7	1950	1983	33
GREENS BAYOU 1	1949	1985	36
GREENS BAYOU 2	1949	1985	36
GREENS BAYOU 3	1953	1984	31
GREENS BAYOU 4	1953	1984	31
PH ROBINSON 1	1966	2005	39
PH ROBINSON 3	1968	2005	37
TH WHARTON 1	1958	1985	27
TH WHARTON 2	1960	2005	45
WEBSTER (TX) 1	1954	1985	31
WEBSTER (TX) 2	1955	1985	30
WEBSTER (TX) 3	1965	2005	40
<u>OG&E ELECTRIC SERVICES INC</u>			
ARBUCKLE 1	1953	2002	49
BELLE ISLE 1	1930	1980	50
BELLE ISLE 2	1943	1980	37
HORSESHOE LAKE 1	1924	1981	57
HORSESHOE LAKE 2	1927	1981	54
HORSESHOE LAKE 3	1928	1981	53
HORSESHOE LAKE 4	1947	1981	34
HORSESHOE LAKE 5	1923	1981	58
MUSKOGEE 2	1924	1980	56
OSAGE (OK) 1	1928	1981	53
OSAGE (OK) 2	1948	1981	33
<u>OMAHA PUBLIC POWER DIST</u>			
JONES STREET 06	1917	1974	57
JONES STREET 07	1921	1974	53
JONES STREET 08	1925	1974	49
JONES STREET 09	1929	1974	45
JONES STREET 10	1937	1974	37
JONES STREET 11	1949	1988	39
JONES STREET 12	1951	1988	37
SOUTH OMAHA 2	1948	1975	27

Florida Power & Light Company
 Life Spans of Retired US Oil and Gas Steam Generating Units, 10 MW or Greater

<u>Unit</u> (1)	<u>Installation Year</u> (2)	<u>Retirement Year</u> (3)	<u>Life Span</u> (4)
<u>ORLANDO UTILITIES COMM (FL)</u>			
LAKE HIGHLAND 1	1949	1984	35
LAKE HIGHLAND 2	1954	1984	30
LAKE HIGHLAND 3	1956	1984	28
<u>PACIFIC GAS AND ELECTRIC CO</u>			
AVON 1	1940	1986	46
HUNTERS POINT 1	1929	1973	44
HUNTERS POINT 2	1948	1994	46
HUNTERS POINT 3	1949	1994	45
HUNTERS POINT 4	1958	2006	48
MARTINEZ 1	1941	1985	44
OLEUM 1	1942	1988	46
OLEUM 2	1943	1988	45
<u>PASADENA WATER AND POWER DEPT</u>			
BROADWAY (CA) B1	1954	2002	48
BROADWAY (CA) B2	1957	2002	45
GLENARM 8	1932	1979	47
GLENARM 9	1949	1984	35
<u>PEPCO ENERGY SERVICES INC</u>			
BENNING 10	1927	1973	46
BENNING 11	1929	1981	52
BENNING 12	1931	1981	50
BENNING 13	1947	1981	34
BENNING 14	1952	1981	29
BUZZARD POINT 1	1933	1981	48
BUZZARD POINT 2	1948	1981	33
BUZZARD POINT 3	1940	1981	41
BUZZARD POINT 4	1942	1981	39
BUZZARD POINT 5	1943	1981	38
BUZZARD POINT 6	1945	1981	36
<u>PNM</u>			
PERSON 1	1952	1987	35
PERSON 2	1953	1987	34
PERSON 3	1954	1987	33
PERSON 4	1957	1987	30
PRAGER 9	1948	1986	38
<u>PORTLAND GENERAL ELECTRIC CO</u>			
STATION L 1	1921	1975	54
STATION L 4	1926	1975	49
STATION L 6	1930	1975	45
<u>PPL MONTANA LLC</u>			
FRANK BIRD 1	1951	1996	45
<u>PROGRESS ENERGY FLORIDA</u>			
AVON PARK 1	1928	1975	47
BAYBORO 2	1926	1974	48
BAYBORO 3	1944	1974	30
BAYBORO 4	1949	1974	25
GE TURNER 1	1926	1975	49
GE TURNER 2	1948	1977	29
GE TURNER 3	1955	1994	39
GE TURNER 4	1959	1994	35
HIGGINS 1	1951	1994	43
HIGGINS 2	1953	1994	41
HIGGINS 3	1953	1994	41
INGLIS 1	1926	1974	48
INGLIS 2	1926	1974	48
INGLIS 3	1947	1974	27

Florida Power & Light Company
Life Spans of Retired US Oil and Gas Steam Generating Units, 10 MW or Greater

<u>Unit</u> (1)	<u>Installation Year</u> (2)	<u>Retirement Year</u> (3)	<u>Life Span</u> (4)
<u>PSEG FOSSIL LLC</u>			
ALBANY (NY) 1	1952	2005	53
ALBANY (NY) 2	1952	2005	53
ALBANY (NY) 3	1953	2005	52
ALBANY (NY) 4	1954	2005	51
BERGEN 2	1960	1995	35
BURLINGTON (NJ) 5	1940	1978	38
BURLINGTON (NJ) 6	1943	1984	41
BURLINGTON (NJ) 7	1955	1997	42
ESSEX 1	1947	1984	37
ESSEX 2	1916	1974	58
ESSEX 3	1918	1974	56
ESSEX 4	1924	1974	50
ESSEX 5	1924	1974	50
ESSEX 6	1924	1972	48
KEARNY (NJ) 7	1953	2005	52
KEARNY (NJ) 8	1953	2005	52
LINDEN 4	1972	1996	24
SEWAREN 5	1962	1992	30
<u>PUBLIC SERVICE CO OF OKLAHOMA</u>			
LAWTON 4	1948	1971	23
WELEETKA 1	1928	1977	49
WELEETKA 2	1931	1977	46
WELEETKA 3	1950	1977	27
<u>PUBLIC SERVICE COLORADO</u>			
VALMONT (CO) 1	1924	1987	63
VALMONT (CO) 2	1926	1987	61
VALMONT (CO) 3	1937	1987	50
VALMONT (CO) 4	1941	1987	46
<u>PUBLIC SVC CO OF NEW HAMPSHIRE</u>			
KELLYS FALLS 2	1922	1972	50
MANCHESTER 1	1938	1981	43
SCHILLER 3	1949	1991	42
<u>PUGET SOUND ENERGY INC</u>			
SHUFFLETON 1	1929	1994	65
<u>QUINNIPIAC ENERGY LLC</u>			
ENGLISH 1	1929	1981	52
ENGLISH 2	1929	1981	52
ENGLISH 3	1930	1981	51
ENGLISH 4	1930	1981	51
ENGLISH 5	1930	1981	51
ENGLISH 6	1931	1981	50
<u>RENU POWER LLC</u>			
LA PALMA 3	1928	1973	45
VICTORIA (TX) 3	1952	1986	34
VICTORIA (TX) 4	1955	2006	51
VICTORIA (TX) 5	1963	2006	43
VICTORIA (TX) 6	1968	2006	38
<u>ROCHELLE MUNI UTILITIES</u>			
ROCHELLE S1	1962	2003	41

Florida Power & Light Company
 Life Spans of Retired US Oil and Gas Steam Generating Units, 10 MW or Greater

<u>Unit</u> (1)	<u>Installation Year</u> (2)	<u>Retirement Year</u> (3)	<u>Life Span</u> (4)
<u>ROCHESTER GAS & ELEC CORP (NY)</u>			
BEEBEE 01	1927	1980	53
BEEBEE 02	1927	1977	50
BEEBEE 06	1941	1986	45
BEEBEE 10	1938	1986	48
BEEBEE 11	1943	1986	43
<u>RRI ENERGY INC</u>			
AVON LAKE 1	1926	1983	57
AVON LAKE 2	1926	1983	57
AVON LAKE 3	1928	1983	55
AVON LAKE 4	1929	1983	54
AVON LAKE 5	1943	1983	40
ETIWANDA 1	1953	2003	50
ETIWANDA 2	1953	2003	50
GILBERT 1	1930	1995	65
GILBERT 2	1930	1995	65
GILBERT 3	1949	1996	47
SAYREVILLE 1	1930	1994	64
SAYREVILLE 2	1930	1995	65
SAYREVILLE 3	1949	1995	46
SAYREVILLE 4	1955	2005	50
SAYREVILLE 5	1958	2005	47
WERNER 4	1953	1996	43
<u>SAN DIEGO GAS & ELECTRIC</u>			
SILVER GATE 1	1943	1984	41
SILVER GATE 2	1948	1984	36
SILVER GATE 3	1950	1984	34
SILVER GATE 4	1952	1984	32
STATION B (CA) 21	1923	1983	60
STATION B (CA) 22	1927	1983	56
STATION B (CA) 24	1928	1983	55
STATION B (CA) 25	1938	1983	45
<u>SE TECHNOLOGIES INC</u>			
MARION (NJ) 6	1913	1974	61
<u>SEATTLE CITY LIGHT</u>			
LAKE UNION 12	1918	1987	69
LAKE UNION 13	1921	1987	66
<u>SOUTH CAROLINA ELEC & GAS CO</u>			
HAGOOD 1	1947	1993	46
HAGOOD 2	1950	1993	43
HAGOOD 3	1952	1993	41
<u>SOUTHWESTERN ELEC POWER CO</u>			
ARSENAL HILL 1	1938	1978	40
ARSENAL HILL 2	1926	1978	52
ARSENAL HILL 3	1927	1978	51
ARSENAL HILL 4	1927	1978	51
KNOX LEE 1	1950	1987	37
<u>SOUTHWESTERN PUB SERV CO (TX)</u>			
CARLSBAD (NM) 3	1949	1983	34
CARLSBAD (NM) 4	1952	1983	31
DENVER CITY 2	1946	1981	35
DENVER CITY 3	1948	1981	33
DENVER CITY 4	1955	1984	29
EAST PLANT (TX) 3	1930	1980	50
EAST PLANT (TX) 4	1942	1980	38
EAST PLANT (TX) 5	1951	1980	29
MOORE COUNTY 2	1950	1984	34
RIVERVIEW (TX) 3	1927	1970	43
RIVERVIEW (TX) 4	1919	1970	51
RIVERVIEW (TX) 5	1948	1983	35
TUCO 3	1949	1974	25

Florida Power & Light Company
Life Spans of Retired US Oil and Gas Steam Generating Units, 10 MW or Greater

<u>Unit</u> (1)	<u>Installation Year</u> (2)	<u>Retirement Year</u> (3)	<u>Life Span</u> (4)
<u>SUNFLOWER ELECTRIC COOP</u>			
FORT DODGE 3	1957	1983	26
GREAT BEND 1	1953	1983	30
GREAT BEND 2	1955	1983	28
<u>SUPERIOR WTR LT & POWER</u>			
WINSLOW 2	1942	1993	51
WINSLOW 3	1952	1993	41
<u>TAMPA ELECTRIC CO</u>			
HOOKEERS POINT 1	1948	2003	55
HOOKEERS POINT 2	1950	2003	53
HOOKEERS POINT 3	1950	2003	53
HOOKEERS POINT 4	1953	2003	50
HOOKEERS POINT 5	1955	2003	48
PO KNIGHT 6	1945	1970	25
SEBRING 1	1966	2003	37
<u>TOPAZ POWER GROUP LLC</u>			
NUECES BAY 3	1942	1978	36
NUECES BAY 4	1943	1978	35
<u>TUCSON ELECTRIC POWER CO</u>			
DE MOSS PETRIE 1	1949	1990	41
DE MOSS PETRIE 2	1949	1990	41
DE MOSS PETRIE 3	1953	1991	38
DE MOSS PETRIE 4	1954	1991	37
<u>UNITED ILLUMINATING CO</u>			
STEEL POINT 01	1923	1981	58
STEEL POINT 02	1923	1981	58
STEEL POINT 03	1924	1981	57
STEEL POINT 04	1926	1981	55
STEEL POINT 05	1927	1981	54
STEEL POINT 06	1930	1981	51
STEEL POINT 07	1931	1981	50
STEEL POINT 09	1941	1992	51
STEEL POINT 11	1950	1992	42
<u>US POWER GENERATING CO LLC</u>			
ASTORIA (NY) 1	1953	1993	40
<u>VECTREN ENERGY INDIANA SOUTH</u>			
OHIO RIVER 2	1936	1981	45
OHIO RIVER 3	1938	1981	43
OHIO RIVER 4	1938	1984	46
OHIO RIVER 5	1945	1984	39
OHIO RIVER 6	1949	1984	35
OHIO RIVER 7	1951	1984	33
<u>WE ENERGIES</u>			
COMMERCE STREET 15	1941	1988	47
LAKESIDE (WI) 1	1920	1983	63
LAKESIDE (WI) 11	1930	1983	53
LAKESIDE (WI) 2	1921	1983	62
LAKESIDE (WI) 3	1922	1983	61
LAKESIDE (WI) 4	1924	1983	59
LAKESIDE (WI) 5	1924	1983	59
LAKESIDE (WI) 6	1926	1983	57
LAKESIDE (WI) 9	1928	1983	55

Florida Power & Light Company

Life Spans of Retired US Oil and Gas Steam Generating Units, 10 MW or Greater

<u>Unit</u> (1)	<u>Installation Year</u> (2)	<u>Retirement Year</u> (3)	<u>Life Span</u> (4)
<u>WESTAR ENERGY INC</u>			
ABILENE (KS) 1	1940	1986	46
ABILENE (KS) 2	1947	1986	39
HUTCHINSON (KS) 1	1950	2007	57
HUTCHINSON (KS) 2	1950	2007	57
HUTCHINSON (KS) 3	1951	2007	56
LAWRENCE (KS) 1	1939	1994	55
TECUMSEH (KS) 03	1927	1979	52
TECUMSEH (KS) 04	1930	1979	49
TECUMSEH (KS) 07	1948	1983	35
TECUMSEH (KS) 08	1951	1983	32
<u>WISCONSIN PUBLIC SERVICE CORP</u>			
JP PULLIAM 1	1927	1980	53
<u>WORTHINGTON PUB UTILS</u>			
WORTHINGTON (MN) 3	1953	1980	27
TOTAL LIFE SPAN YEARS			29,798
TOTAL NUMBER OF UNITS			+
AVERAGE LIFE SPAN, YEARS			<u>670</u> 44.47

Source: Platts World Electric Power Plants Database, Jun 2009

BEFORE THE PUBLIC UTILITIES COMMISSION OF NEVADA

Application of Sierra Pacific Power Company for authority)
to increase its annual revenue requirement for general rates)
charged to all classes of electric customers and for relief) Docket No. 05-10003
properly related thereto.)

Application of Sierra Pacific Power Company for approval)
of new and revised depreciation rates for electric operations)
based on its 2005 depreciation study.) Docket No. 05-10004

At a general session of the Public
Utilities Commission of Nevada, held
at its offices on April 26, 2006.

PRESENT: Chairman Donald L. Soderberg
Commissioner Carl B. Linvill
Commissioner Jo Ann P. Kelly
Commission Secretary Crystal Jackson

ORDER

The Public Utilities Commission of Nevada ("Commission") makes the following
findings of fact and conclusions of law:

I. PROCEDURAL HISTORY

1. On October 3, 2005, Sierra Pacific Power Company ("Sierra" or the
"Company") filed an Application with the Public Utilities Commission of Nevada
("Commission") for authority to increase its annual revenue requirement for general rates
charged to all classes of electric customers within its service territory in the amount of
\$27,098,000 and for relief properly related thereto. This Application has been designated
by the Commission as Docket No. 05-10003.

2. On October 3, 2005, Sierra filed an additional Application with the
Commission seeking approval of the new and revised depreciation rates for electric
operations. This Application is based on Sierra's 2005 depreciation study and has been
designated Docket No. 05-10004 by the Commission.

Sierra's estimates derived from its remaining life study. On rebuttal, Sierra stated that the Transportation Department has detailed records for each vehicle that include the remaining life based upon when the vehicle was purchased and when its sale is planned. Sierra believes that it is more precise to use this data to develop a remaining life for the entire account instead of performing a life analysis. While Sierra stated that it had all the detailed information to develop a better estimate, it did not make clear what it actually intends to do with its fleet. Sierra was not certain when or if it would switch to a capital lease program for its transportation equipment. The Commission believes that Sierra has not justified its position for departing from normal depreciation accounting for the transportation accounts. The Commission finds that Sierra shall continue to use depreciation accounting for its transportation accounts.

271. BCP objects to Sierra's approach to interim retirements because it is cumbersome and inappropriate for application in Sierra's depreciation application. Sierra stated that its outside expert, Gannett Fleming, has been using this approach for years to calculate interim retirements for all of its studies across the U.S. and Canada including NPC's last depreciation case. Sierra explained that there are two different methods used to calculate interim retirements. Both are based upon historical data and informed judgment and neither method is superior. The Commission is convinced that Sierra's proposed methodology for calculating interim retirements is adequate and widely accepted in the industry. The Commission accepts Sierra's approach to calculating interim retirements.

272. BCP does not agree with Sierra's method for calculating remaining life. BCP stated that Sierra's proposed modification to the remaining life calculation is not only unnecessary, but produces incorrect results. Sierra explained its remaining life methodology, its application in studies it has completed, and addressed each of BCP's criticisms. Sierra noted that the remaining life approach used is the same approach that has been used by Gannett Fleming in 80-90 depreciation studies including NPC's last depreciation study. The Commission is convinced that Sierra's proposed methodology

for calculating remaining life is adequate and widely accepted in the industry. The Commission accepts Sierra's method for calculating remaining life.

273. BCP stated that Gannett Fleming's Summary Statement contains an error at A(1)(a) at page 2 for Account 366-Distribution, Underground Conduit. Sierra indicated that there was in fact an error in the recording of future accruals for this account. However, Sierra explained that the future accrual rate was derived separately. Therefore, it was not affected by the error and does not require an adjustment to Sierra's proposed depreciation rates. The Commission is convinced that the error noted by BCP does not result in any required adjustment to Sierra's accrual rate for Account 366 or its depreciation expense. The Commission rejects BCP's proposed Account 366 adjustment.

274. A summary of the Commission's positions on the proposed adjustments is listed below.

Summary of Adjustments		
Proposed Adjustments	Position Accepted	Estimated Depreciation Expense Impact (Millions)
IRP Retirement Dates For Steam Production Plant	Staff	\$10.00
Net Salvage Values for Various Accounts (Staff)	Staff	\$1.40
Net Salvage Values For Steam Production Plant	Staff	(\$6.00)
Net Salvage Rate for Hydroelectric Prod. Plant	Staff	(\$0.05)
Average Service Lives (Staff, BCP)	Staff, BCP	(\$4.40)
Amortization Accounting (Staff, BCP)	Sierra	\$0.00
Sierra's ASLs For Transportation Equipment	Staff	(\$0.12)
Interim Retirement (BCP)	Sierra	\$0.00
Remaining Life Methodology (BCP)	Sierra	\$0.00
Accounting Error (BCP)	Sierra	\$0.00
Balance		\$0.83

The Company shall calculate the approved depreciation rates based on the narrative above and file them as a compliance item so that rates may go into effect May 1, 2006.

The one item that has not been listed in the table above is the depreciation expense associated with the removal of the Farad hydroelectric plant from rate base. The Company is to calculate that adjustment and include it with its compliance item.

Statistical Analyses of Industrial Property Retirements

by
Robley Winfrey



BULLETIN 125
REVISED

ENGINEERING RESEARCH INSTITUTE
IOWA STATE UNIVERSITY • AMES, IOWA

Statistical Analyses of Industrial Property Retirements

by Robley Winfrey

(Revised April, 1967 by Harold
A. Cowles, Professor, Department
of Industrial Engineering)

Originally printed as
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IOWA ENGINEERING EXPERIMENT STATION
December, 1935

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Dockets No. 080677-EI, No. 090130-EI
Statistical Analysis, Bulletin 125
Exhibit CRC-6, Page 1 of 2

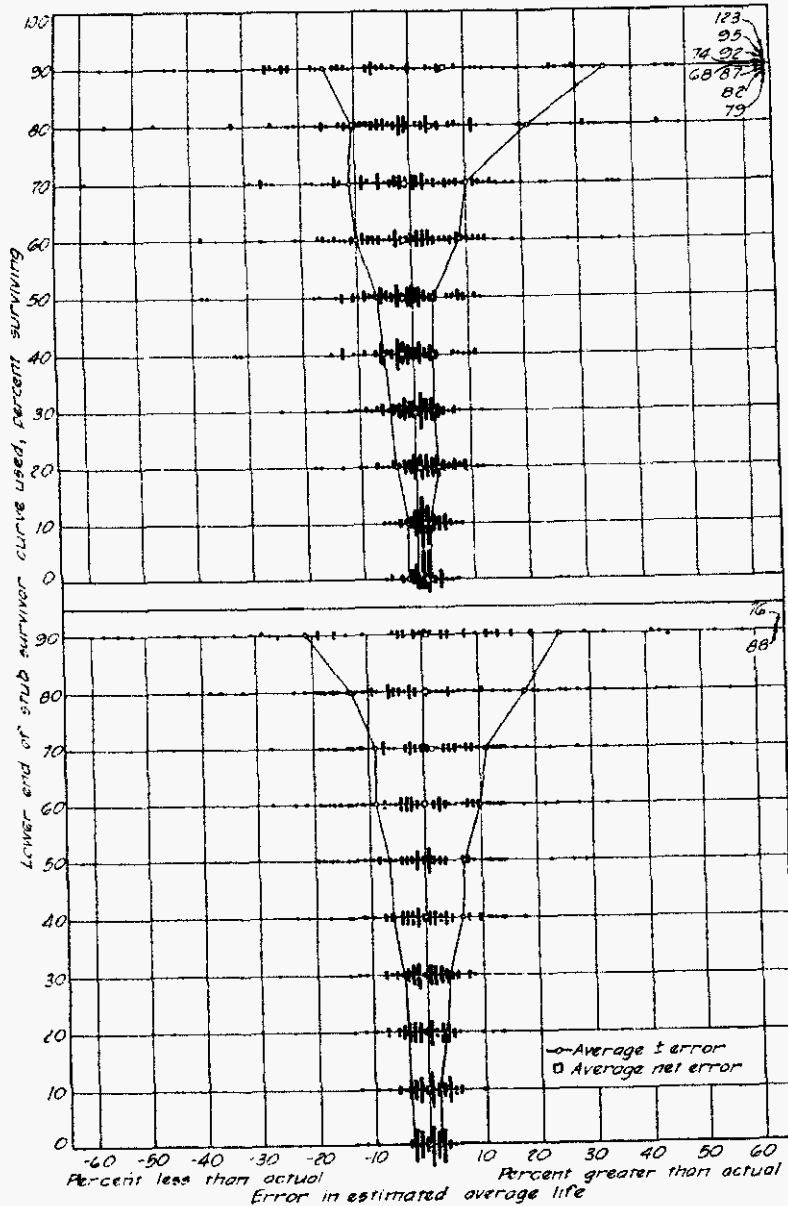


Fig. 30.—(Lower) Errors in estimating the probable average lives of the first 65 original curves by comparing stub curves of different lengths with the type survivor curves in the form shown in Fig. 29. (Upper) Same for curves 66 to 126.

and L_3 , the S_1 and S_2 , the R_2 and R_3 , or other two adjacent curves in the same family. Another reason why the classifications are not the same is that the survivor curves for the high-modal curves are quite steep, and, therefore, these types when plotted as survivor curves appear to be about the same, except at the ends. The frequency curves emphasize the differences and are the better guides to classification.

The frequency curves are difficult to use in this method because of the scattering of the original data, which makes the location of the curve doubtful. In the case of original data well graduated, sets of the type frequency curves, plotted to definite average lives as is done in Fig. 29, were used successfully in a test similar to the two just described on a group selected from the first 65 curves. Ordinarily, this step is not warranted, for the probable average life estimated from the survivor curves is likely to be within the limits of error as controlled by the quantity and reliability of the original data.

The estimation of the probable average life of a group of units by comparing their survivor curve (completed curve or stub curve) with the type curves should not be done without the exercise of judgment in the interpretation of the original data. Any of the methods of constructing survivor curves frequently result in curves which do not exhibit regularity. An examination of the information from which the curves are calculated may show that the irregularity is produced by small groups, infrequent observations of the property, or the retirement of an unusually large number of units for a very special cause. Best practice in these instances is to smooth the data according to the path most likely to be established by regular observations on large numbers of the units and one in accordance with the most likely future rate of retirement.

When survivor curves are to be classified according to the 18 types and the probable average life determined, it is recommended that more weight be given to the middle portion of the survivor curve, say that between 80 and 20 percent surviving, than to the forepart or extreme lower end of the curve. This inner section is a result of greater numbers of retirements and also it covers the period of most likely normal operation of the property.

This method of estimating average life by comparing stub curves with the 18 type survivor curves is remarkably accurate when the many factors are taken into consideration which tend to change the curve from time to time. The simplicity of the method is also a strong recommendation for it.

An alternate method of determining the probable average life of a group of units from a stub survivor curve developed from the experience of the first units to be retired is to extend the curve by eye and judgment. Obviously, the method presented above is much to be preferred for it allows the use of judgment as well as offering the experience of the general law of distribution of retirement followed by all industrial properties.

819

CALIFORNIA PUBLIC UTILITIES COMMISSION
UTILITIES DIVISION

DETERMINATION
OF
STRAIGHT-LINE REMAINING LIFE
DEPRECIATION ACCRUALS

RECEIVED
NOV 12 1965

GANNETT, FLEMING, CORDDRY &
CARPENTER, INC.

STANDARD PRACTICE U-4

SAN FRANCISCO, CALIFORNIA
Revised January 3, 1961

Accounting Records of Gross Additions and Plant Balances

9. Where mortality summary data and age distribution data are not developed, considerable information on which to base estimates may be developed from the plant accounting records maintained in conformance with the uniform systems of accounts. Some caution must be exercised, however, to eliminate the distortion caused by transfers and adjustments to accounts, by changes in accounting classification, and by abnormally large retirements or replacements of units. Use of these data yields more reliable results in accounts with stable plant or plant with uniform growth where no noticeable trend toward longer or shorter service lives is evident. With these precautions in mind the following may be developed:
- A representative survivor curve is obtainable by simulated plant balance methods.
 - Indications of average service life may be obtained by turnover methods.
 - From a selected applicable average service life indications of the remaining life may be calculated.

Details of procedure to accomplish items a and b are beyond the scope of this practice. Where a utility has used these methods, the staff engineer in his review should check the period of years used in relation to anticipated future conditions. He should also check to insure reasonable adjustment of the accounting data for transfers, changes in classification and other abnormal experience when applicable. Details of procedure to accomplish Item c are presented in Paragraph 16 below.

C--METHODS OF WEIGHTING

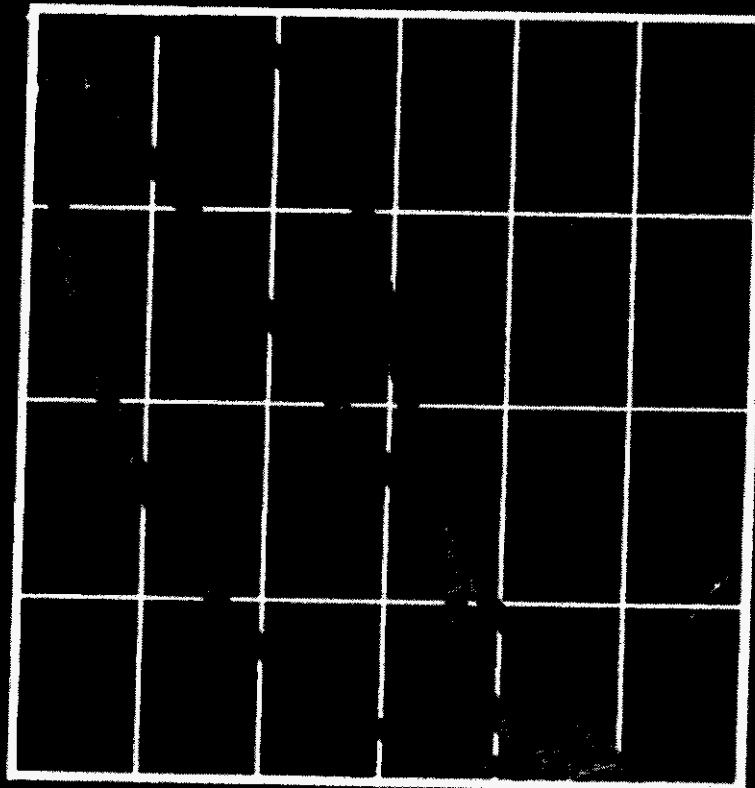
Types of Weighting

10. Before considering the methods for obtaining remaining life it is well to consider the means by which estimates for separate classes of property or separate age groups may be weighted to afford a composite value. Three types of weighting are used as follows:
- Direct weighting* or weighting by future dollar years. This calculation requires that the book dollars for each age group or class of property be multiplied by the remaining life applicable to those dollars. The composite remaining life is then obtained by dividing the total of the products by the total plant dollars. The products under this method of weighting are spoken of as future dollar years. The last three columns of standard form D3 may be used for this calculation as illustrated in Tables 5-A and 5-B.
 - Reciprocal weighting*. This is accomplished by dividing the book dollars by the remaining life for each age group or class of property, totalling these quotients and dividing the total into the total book dollars.
 - Average service life weighting*. In this method the book cost for each class of property is divided by the average service life and the result is multiplied by the remaining life. The composite remaining life for all classes then equals the sum of these products divided by the sum of these quotients.

Selecting a Method of Weighting

11. In selecting a method of weighting, several considerations apply. First, it is desired that the method of weighting used shall produce the same results as though the book reserve had been prorated to the various age groups or classes of property on the basis of the applicable reserve requirement. Secondly, it is desirable that the result obtained by weighting be in conformance with the provisions of certain of the uniform systems of accounts, that the accrual computed for an account as a whole shall be the same as if separate accruals had been computed for each class of property and the total obtained. Under these considerations, direct weighting produces proper results if the average service life of each age group or class of property weighted is approximately the same. Reciprocal weighting produces proper results if the reserve for the various classes of property or groups weighted is distributed in proportion to the plant dollars, a condition which is more likely in stable plant with slow growth. Average service life weighting produces proper results if the book reserve and the reserve requirement are closely the same. From these considerations it is concluded that direct or future dollar weighting is the proper method to use between age groups, whereas either reciprocal weighting or average service life weighting will usually yield the better approximation between classes of property. In very large accounts where individual classes of property exceed \$100,000 of plant, occasionally a utility may prefer to prorate the book reserve within the account according to a reserve requirement between each class of property rather than to attempt any of the other weighting methods. Such a proration is used only infrequently, is made only at the time of a periodic review for weighting purposes within a very large account, and is normally not carried forward from the date of the calculation.

PUBLIC UTILITY DEPRECIATION PRACTICES



Public Utility

Depreciation Practices

August 1996



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Fitting with Type Curves

Curve fitting is the process of determining the trend or pattern developed from the known historical facts. Once data have been assembled, an observed interim retirement life table can be developed. This observed curve can be fitted to generalized life curves, e.g., Iowa curves or curves based on the Gompertz-Makeham formula. These curves and curve fitting processes are described in detail in Appendix A, parts 1-3.

The techniques used in curve fitting may be mathematical, graphical matching techniques with type curves, and/or visual inspection. Mathematical curve fitting is advantageous because the interim retirement curve may be based on broad experience bands.

The choice of the curve fitting technique could depend on the ease of handling the data and the ease of interpreting the results. The mathematical techniques may yield significantly better results, compared to graphical matching or the visual inspection process.

The Generation Arrangement

The generation arrangement is applicable even in cases where obsolescence is being experienced and no new installations are made but substantial sums of money are still being invested just to keep the plant. For life span categories the generation arrangement provides a sound basis for determining the average service life and average remaining life.

Vintage remaining lines are developed using an interim retirement rate and the AYFR to compute vintage average life expectancies. These remaining lives are combined with historical experience in the age distribution of the surviving investment, which is derived from actual or computed mortality experience, to develop the average service life.

Tables 10-5 and 10-6 are examples of interim retirement life and generation arrangement tables. The AYFR and survivor curve are based on the estimated retirement schedule in Table 10-1 and the interim retirement rate developed in Table 10-2.

Florida Power & Light Company
Docket No. 080677-EI
DEPRECIATION - OPC's First Set of Interrogatories
Interrogatory No. 55
Page 1 of 1

Q.

Transmission Towers & Fixtures. Please explain why FPL decreased the average service life from 45 years to 40 years for Account 354 – Transmission Towers & Fixtures, as set forth on Exhibit CRC – 1, page 510. The response should specifically address references made to the industry data suggesting a 40 to 70-year average service life and why FPL thought that it was appropriate to move to the lowest level of the identified industry range. The response should include a step by step analysis identifying each factor and how each factor interacted with other factors that were employed to arrive at the proposed 40-year average service life.

A.

Account 354 Towers and Fixtures should have a 45-R5 curve and life. There was not enough data to perform a complete life analysis and therefore the curve and life were left unchanged from the current approved. The information in the Depreciation Report (Exhibit CRC-1) that discusses the change to a 40-R5 life and curve is incorrect and should be changed. The Depreciation Report and associated work papers will be revised to reflect the 45-R5 life and curve. The impact of this revision would be approximately \$1.5 million decrease in annual depreciation expense.