

**BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

---

In re: Petition for rate increase by  
Progress Energy Florida, Inc.

---

DOCKET NO. 090079-EI

Submitted for filing: March 20, 2009

**DIRECT TESTIMONY AND EXHIBITS**

**OF**

**EARL M. ROBINSON**

**ON BEHALF OF  
PROGRESS ENERGY FLORIDA, INC**

1 **I. INTRODUCTION, PURPOSE, AND SUMMARY.**

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

3 **A.** My name is Earl M. Robinson. My office is located at 792 Old Highway 66, Suite  
4 200, Tijeras, New Mexico 87059.

5  
6 **Q. By whom are you employed and in what position?**

7 **A.** I am a Principal & Director of AUS Consultants. AUS Consultants is a consulting  
8 firm specializing in preparing various financial studies including depreciation,  
9 valuation, revenue requirements, cost of service, rate of return, and other analysis and  
10 studies for the utility industry and numerous other entities. AUS Consultants provides  
11 a wide spectrum of consulting services through its practices that include Depreciation  
12 & Valuation, Intellectual Property Management, Knowledge Management, Rate of  
13 Return, Revenue Requirements & Cost of Service, and Education & Publications.

14  
15 **Q. Have you prepared a statement of your experience and qualifications?**

16 **A.** Yes. That statement is included as Exhibit No. \_\_\_\_ (EMR-1) to my direct testimony and it  
17 is true and correct.

18  
19 **Q. On whose behalf are you submitting this testimony?**

20 **A.** I am submitting this testimony on behalf of Progress Energy Florida, Inc (“PEF” or the  
21 “Company”).

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

2 **A.** The purpose of my testimony is to set forth the results of my review and analysis of  
3 the PEF plant-in-service, which was conducted in the process of preparing a  
4 comprehensive depreciation study of PEF's generation, transmission, distribution, and  
5 general plant assets as of December 31, 2007, and developing proforma depreciation  
6 rates as of December 31, 2009. A true and correct copy of that study is included in  
7 Exhibit No. \_\_\_ (EMR-2) to my testimony. In completing the study, my tasks  
8 included an investigation and analysis of PEF's historical plant data, together with an  
9 interpretation of PEF's past experience and future expectations, to determine the  
10 remaining lives of PEF's property. The study utilized the resulting remaining lives,  
11 the results of our salvage analysis, and PEF's vintage plant-in-service investment and  
12 depreciation reserve to develop recommended average remaining life depreciation  
13 rates, and depreciation expense, related to PEF's plant-in-service.

14  
15 **Q. Please summarize your testimony.**

16 **A.** I conducted a comprehensive study of PEF's depreciable property using the  
17 Company's historical data through December 31, 2007, discussions with the  
18 Company's staff and management to identify prior and prospective factors affecting  
19 PEF's plant in service, and generally accepted, utility industry standard depreciation  
20 methods, procedures, and techniques. As a result, I determined the appropriate service  
21 lives for the Company's surviving plant and, using them and the life characteristics  
22 developed from the study of the plant assets, I determined recommended average  
23 remaining life depreciation rates related to the Company's historic plant in service as

1 of December 31, 2007. From there, pro forma depreciation rates were developed by  
2 updating the Company's December 31, 2007 depreciation study database with the  
3 2008 and 2009 budget activity. The Company's book depreciation reserves were also  
4 updated to December 31, 2009, and applying the same depreciation methods and  
5 techniques, average remaining life depreciation rates were determined for the pro  
6 forma depreciable plant as of December 31, 2009.

7 The application of the pro forma depreciation rates to the December 31, 2009  
8 depreciable plant in service results in an annual depreciation expense of \$445,613,594,  
9 which is an increase of \$97,355,430 from the current depreciation rate level. The  
10 depreciable plant in service is \$12,020,397,963 as of December 31, 2009 compared to  
11 depreciable plant in service of \$9,536,876,227 as of December 31, 2007. The change  
12 in the annual composite depreciation rate resulting from applying individual account  
13 level depreciation rates to PEF's December 31, 2009 plant-in-service produced a  
14 proposed composite depreciation rate of 3.71 percent. The proposed composite  
15 depreciation rate and the individual account level depreciation rates applied to PEF's  
16 December 31, 2009 plant-in-service can be found in Table 1F-(ProForma), Section 2,  
17 p. 2-8, in Exhibit No. \_\_\_\_ (EMR-2).

18 I recommend that the proposed depreciation rates set forth in my depreciation  
19 study should be uniformly and prospectively adopted by the Commission for  
20 regulatory purposes and by PEF for accounting purposes. These proposed  
21 depreciation rates are based on PEF's actual and expected plant in service and they are  
22 consistent with generally accepted, industry standard depreciation methods,  
23 procedures, and techniques.

1 **II. GENERALLY ACCEPTED DEPRECIATION ANALYSIS.**

2 **Q. How is depreciation defined?**

3 **A.** Depreciation is defined in the 1996 National Association of Regulatory Utility  
4 Commissioners (NARUC) "Public Utility Depreciation Practices" publication as  
5 follows: "Depreciation, as applied to depreciable utility plant, means the loss in  
6 service value not restored by current maintenance, incurred in connection with the  
7 consumption or prospective retirement of utility plant in the course of service from  
8 causes which are known to be in current operation and against which the utility is not  
9 protected by insurance. Among the causes to be given consideration are wear and  
10 tear, decay, action of the elements, inadequacy, obsolescence, changes in the art,  
11 changes in demand, and requirements of public authorities."

12  
13 **Q. Why is depreciation important to the revenue requirements of the Company?**

14 **A.** Depreciation is important because, as the above definition describes, depreciation  
15 expense enables PEF to recover in a timely manner the capital costs related to its  
16 plant-in-service benefiting PEF's customers. Appropriate depreciation rates will allow  
17 recovery of PEF's investments in depreciable assets over a life that provides for full  
18 recovery of the investments, less net salvage. Without the appropriate recovery of  
19 depreciation costs, PEF ultimately will not be able to meet its financial obligations  
20 related to the continued provision of service to customers. Furthermore, the inclusion  
21 of the appropriate level of depreciation recovery in revenue requirements serves to  
22 reduce overall costs (total of depreciation and return) to customers as opposed to a  
23 situation where an inadequate level of annual depreciation expense is currently being

1 provided in rates.

2

3 **Q. Are there generally accepted depreciation methods, procedures, and techniques**  
4 **in the utility industry?**

5 **A.** Yes. Inherent in all depreciation calculations is an overall method, such as the  
6 Straight Line Method to depreciate property. Other methods available to develop  
7 average service lives and depreciation rates are accelerated and/or deferral approaches  
8 such as the Sum of the Years Digits Method or Sinking Fund Method. The Straight  
9 Line Method is the most widely used depreciation method or approach in the utility  
10 industry. It is widely understood, recognized, and used almost exclusively for  
11 depreciating utility property.

12 In addition, there are several procedures that can be used to arrange or group  
13 property by sub-groups of vintages to develop applicable service lives. These  
14 procedures include the Broad Group, the Equal Life Group, and other procedures.  
15 Due to the existence of very large quantities of property units within utility operating  
16 property, utility property is typically grouped into homogeneous categories as opposed  
17 to being depreciated on an individual unit basis. The Broad Group and Equal Life  
18 Group procedures are both Straight Line grouping procedures. The Broad Group  
19 Procedure is more widely utilized throughout the utility industry by regulatory  
20 commissions as a basis for depreciation rates. Under the Broad Group Procedure, the  
21 useful life and resulting depreciation rate is based upon the overall average life of all  
22 of the property within the group.

23 Finally, the depreciable investment needs to be recovered over a defined period

1 of time through the use of a depreciation technique, such as the Whole Life or  
2 Average Remaining Life of the property group. The distinction between the Whole  
3 Life and Average Remaining Life Techniques is that under the Whole Life Technique,  
4 the depreciation rate is based on a snapshot and determines the recovery of the  
5 investment and average net salvage over the average service life of the property group  
6 for that moment in time. The Whole Life technique requires either frequent updates to  
7 keep the “snapshot” current or the use of an artificial deferred account that holds  
8 “excess” or “deficient” depreciation reserves. In comparison, under the Average  
9 Remaining Life Technique, the resulting annual depreciation rate incorporates the  
10 recovery of the investment (and future net salvage) less any recovery experienced to  
11 date over the average remaining life of the property group. The Average Remaining  
12 Life Technique is clearly superior in that it incorporates all of the current and future  
13 cost components in setting the proposed annual depreciation rate as opposed to only  
14 some of the current and future cost components as is the case with the Whole Life  
15 Technique. This means that any changes that occur in between depreciation studies  
16 are automatically trued-up in the subsequent study. No artificial deferral account  
17 needs to be established to accomplish such a true-up.

18 According to the Average Remaining Life Technique, the utility recovers the  
19 un-depreciated fixed capital investment through annual depreciation expense in each  
20 year throughout the useful life of the property. The Average Remaining Life  
21 Technique incorporates the future life expectancy of the property, the vintage  
22 surviving plant-in-service, the survival characteristics, together with the book  
23 depreciation reserve balance and future net salvage in developing the amounts for each

1 property account. Accordingly, Average Remaining Life depreciation meets the  
2 objective of providing Straight Line recovery of fixed capital investment.

3 The depreciation methods, procedures, and techniques can be used  
4 interchangeably. For example, one could use the Straight Line Method with the Broad  
5 Group Procedure and the Average Remaining Life Technique, or the Straight Line  
6 Method with the Equal Life Group Procedure and Average Remaining Life  
7 Technique, or combinations thereof.

8 The depreciation rates set forth in my depreciation study report were developed  
9 utilizing the Straight Line Method, the Broad Group Procedure, and the Average  
10 Remaining Life Technique.

11

12 **Q. Why did you use the Straight Line Method, the Broad Group Procedure, and the**  
13 **Average Remaining Life Technique?**

14 **A.** The Straight Line Method, as I mentioned previously, is widely understood, well  
15 recognized, and utilized almost exclusively for depreciating utility property. The  
16 Broad Group Procedure recovers PEF's investments over the average period of time in  
17 which the property is providing service to PEF's customers. I used the Broad Group  
18 Procedure in this study because it is consistent with depreciation methods and  
19 procedures currently used and accepted by this regulatory commission and,  
20 accordingly, is the approach underlying the current depreciation rates.

21 Finally, the amount of annual depreciation must be based upon the productive  
22 life over which the un-depreciated capital investment is recovered, which is what the  
23 Average Remaining Life Technique accomplishes. The utilization of the Average



1 Remaining Life Technique to develop the applicable annual depreciation expense over  
2 the average remaining life assures that PEF's property investment is fully recovered  
3 over the useful life of the property, and that inter-generational inequities are avoided  
4 as current and future customers will pay their fair share of depreciation expense. The  
5 determination of the productive remaining life for each property group relies on a  
6 study of both past experience and future expectations and develops the appropriate  
7 total life and applicable depreciation rates for each of PEF's property groups. The  
8 Average Remaining Life Technique incorporates all of PEF's fixed capital cost  
9 components, thereby better assuring full recovery of PEF's embedded net plant  
10 investment and related costs. The Average Remaining Life Technique gives  
11 consideration not only to the average service life and survival characteristics plus the  
12 net salvage component, but also recognizes the level of depreciation which has been  
13 accrued to date in developing the proposed depreciation rate. The Average Remaining  
14 Life Technique is used by regulated companies and regulatory agencies because it  
15 allows full recovery by the end of the property's useful life - no more and no less.

16  
17 **Q. Why do you use Group depreciation procedures?**

18 **A.** Group depreciation procedures are utilized to depreciate property when more than one  
19 item of property is being depreciated. The group approach refers to the method of  
20 calculating annual depreciation based on the summation of the investment in any one  
21 plant group rather than calculation of depreciation for each individual unit of plant. In  
22 theory, each unit achieves average service life by the time of retirement. Accordingly,  
23 the full cost of the investment will have been credited to plant-in-service by the time

1 the retirement occurs, and likewise the depreciation reserve will be debited with an  
2 equal retirement cost. No gain or loss is recognized at the time of property retirement  
3 because of the assumption that the property was retired at average service life.

4 Such an approach is appropriate because all of the items within a specific  
5 group typically do not have identical service lives, but have lives which are dispersed  
6 over a range of time. Utilizing a group depreciation procedure allows for a uniform  
7 application of depreciation rates to groups of similar property in lieu of performing  
8 extensive depreciation calculations on an item-by-item basis. The Broad Group  
9 approach is a recognized and generally accepted common group depreciation  
10 procedure in the utility industry.

11 The Broad Group Procedure recovers the investment within the asset group  
12 over the average service life of the property group. Given that there is dispersion  
13 within each property group, there are variations of retirement ages for the many  
14 investments within each property group. That is, some properties retire early (before  
15 average service life) while others retire at older ages (after average service life) with  
16 the weighted average retirement age of the total property group being the attained  
17 average service life.

18  
19 **Q. Are there standard depreciation methods to perform a service life analysis of**  
20 **utility property investments?**

21 **A.** Yes. The two most common methods are the Retirement Rate Method and the  
22 Simulated Plant Record Method. The method used to study a utility's historical data  
23 is dependent upon whether aged or un-aged data is available. If specific aged data is

1 available, the Retirement Rate Method is used. If only un-aged data is available, the  
2 Simulated Plant Record Method is used. PEF maintains aged historical data,  
3 therefore, the Retirement Rate Method was used to analyze the Company's historical  
4 data.

5  
6 **Q. What is the purpose of the historical database?**

7 **A.** The historical service life and net salvage data is a basic depreciation study tool that is  
8 assembled to prepare a comprehensive depreciation study. The historical database is  
9 used to make assessments and judgments concerning the service life and salvage  
10 factors that have actually been achieved, and along with information relative to current  
11 and prospective factors, to determine the appropriate future lives over which to  
12 recover the utility's depreciable fixed capital investments. Because PEF maintains  
13 vintage (aged) investment records, the Retirement Rate Method was used to analyze  
14 the historical data.

15 With the Retirement Rate Method of analysis, the actuarial service life data,  
16 which is sorted by age, is used to develop a survivor curve (observed life table). This  
17 survivor curve is the basis upon which smooth curves (standard Iowa Curves) are  
18 matched or fitted to then determine the average service life being experienced by the  
19 property account under study. Computer processing provides the capability to review  
20 various experience bands throughout the life of the account to observe trends and  
21 changes. For each experience band analysis, an "observed life table" is constructed  
22 using the exposure and retirement experience within the selected band of years. In  
23 some cases, the total life cycle of the property has not been achieved and the

1 experienced life table, when plotted, results in a "stub curve." It is the "stub curve," or  
2 the total life curve, if the total life curve is achieved, which is matched or fitted to the  
3 standard Iowa Curves. The matching process is performed both by computer analysis,  
4 using a least squares technique, and by overlaying the observed life tables on the  
5 selected smooth curves for visual reference. The fitted smooth curve is a benchmark  
6 which provides a basis to determine the estimated average service life for the property  
7 group under study.

8

9 **Q. You refer to the use of Iowa or smoothed survivor curves. Can you generally**  
10 **describe the Iowa curves and explain their purpose in the Average Remaining**  
11 **Life Technique?**

12 **A.** Yes. The preparation of a depreciation study typically incorporates smoothed curves  
13 to represent the experienced or estimated survival characteristics of the property. The  
14 "smoothed" or standard survivor curves are the "Iowa" family of curves developed at  
15 Iowa State University and which are widely used and generally accepted throughout  
16 the utility industry. The shape of the curves within the Iowa family is dependent upon  
17 whether the maximum rate of retirement occurs before, during or after the average  
18 service life. If the maximum retirement rate occurs earlier in life, it is a left (L) mode  
19 curve; if it occurs at average life, it is a symmetrical (S) mode curve; if it occurs after  
20 average life, it is a right (R) mode curve. In addition, there is the origin (O) mode  
21 curve for plant which has heavy retirements at the beginning of life.

22 At any particular point in time, however, actual utility plant may not have  
23 completed its life cycle. Therefore, the survivor table generated from the utility's

1 historical data is not complete. This situation requires that an estimate be made with  
2 regard to the incomplete segment of the property group's life experience. Further,  
3 actual experience often varies from age interval to age interval, making its utilization  
4 for average service life estimation difficult. Accordingly, the Iowa Curves are used to  
5 both extend the utility experience to zero percent surviving as well as to smooth actual  
6 utility data.

7  
8 **Q. What factors affect the length of the average service life that an electric utility's**  
9 **property may achieve?**

10 **A.** Service lives are affected by many different factors, some of which can be determined  
11 from studying past experience, others of which must rely heavily on future  
12 expectations. The three major factors are: (1) physical; (2) functional; and (3)  
13 contingent casualties. The physical factor includes such things as deterioration, wear  
14 and tear, and the action of the natural elements. The functional factor includes  
15 inadequacy, obsolescence, and requirements of governmental authorities.  
16 Obsolescence occurs when it is no longer economically feasible to use the property to  
17 provide service to customers or when technological advances have provided a  
18 substitute with superior performance. The remaining factor, contingent casualties,  
19 includes retirements caused by accidental damage or construction activity of one type  
20 or another.

21 When physical characteristics are the controlling factor in determining the  
22 service life of property, historical experience is a useful tool in selecting service lives.  
23 In cases where there are changes in technology, regulatory requirements, utility policy

1 or the development of a less costly alternative, historical experience is of lesser or  
2 little value. However, even when considering physical factors, the future lives of  
3 various properties may vary from those experienced in the recent past.

4 In performing the life analysis for any property being studied, both past  
5 experience and future expectations must be considered in order to fully evaluate the  
6 circumstances that may have a bearing on the remaining life of the property. This  
7 includes the review and analysis of historical as well as anticipated retirements,  
8 current and future construction technology, historical experience and future  
9 expectations of salvage, and the cost of removal. This ensures the selection of an  
10 average service life which best represents the expected life of each property  
11 investment.

12  
13 **Q. Is the service life analysis the same for all plant property group accounts?**

14 **A.** No. In contrast to mass plant accounts, location type property classes such as  
15 production plant accounts are routinely depreciated by use of the life span method and  
16 net salvage estimates inclusive of both interim (yearly) retirements and final  
17 retirements. In this jurisdiction, the Company's present and proposed depreciation  
18 rates for production plant accounts include only the recovery of interim net salvage in  
19 its annual depreciation rates. The final net salvage component is recovered through  
20 rates established by a separate fossil fuel dismantlement study for fossil steam  
21 production units and a nuclear decommissioning study for the nuclear production unit.

22 The interim retirements are applicable to components of the property groups  
23 that will not live the entire period of time between original installation date and the

1 estimated probable retirement year. Such retirements can be related to boiler  
2 components, pumps, and motors, for example. The net salvage percentage is  
3 estimated using the standard net salvage analysis procedure and the resulting  
4 percentage estimated is applied only to the level of interim retirements that are  
5 anticipated to occur between the time of original installation date and the probable  
6 retirement year.

7

8 **Q. What is the Life Span Method?**

9 **A.** The Life Span or Forecast Method is a method utilized to study various accounts in  
10 which the expected retirement dates of specific property or locations can be  
11 reasonably estimated. In the Life Span Method, an estimated probable retirement year  
12 is determined for each location of the property group. An example of this would be  
13 the production plant facilities, in which the various segments of the account are "life  
14 spanned" to a probable retirement date which is determined after considering a number  
15 of factors, such as management plans, industry standards, the original construction  
16 date, subsequent additions, resultant average age and the current - as well as the  
17 overall - expected service life of the property being studied. If, in the past, the  
18 property has experienced interim retirements, these are studied to determine an interim  
19 retirement rate. Otherwise, interim retirement rate parameters are estimated for  
20 properties which are anticipated to experience such retirements. The selected interim  
21 service life parameters (Iowa curve and life) are then used with the vintage investment  
22 and probable retirement year of the property to determine the average remaining life as  
23 of the study date.





1 **Q. In the preparation of this and other depreciation studies, have you used**  
2 **information from additional sources when estimating service life and salvage**  
3 **parameters?**

4 **A.** Yes. In addition to the historical data obtained from PEF's books and records,  
5 information was obtained from PEF personnel relative to current operations and future  
6 expectations with respect to depreciation. Discussions were held with PEF planning  
7 and operations management. In addition, physical inspections were also conducted of  
8 various representative sites of PEF's operating property. In the course of completing  
9 the depreciation study, I also incorporated professional knowledge obtained from my  
10 more than thirty-five (35) years of utility industry depreciation experience. Using  
11 these additional information sources and my knowledge and experience is consistent  
12 with the generally accepted application of the standard utility industry depreciation  
13 methods, procedures, and techniques.

14  
15 **III. DEPRECIATION STUDY.**

16 **Q. Did you prepare a Depreciation Study that contains your depreciation analyses**  
17 **and recommendations with respect to PEF's depreciable plant property?**

18 **A.** Yes. The Depreciation Study or Report is Exhibit No. \_\_\_\_ (EMR-2) to my testimony,  
19 entitled "Progress Energy Florida, Inc. Depreciation Study as of December 31, 2007  
20 and Pro Forma Depreciation Rates as of December 31, 2009." This Study summarizes  
21 the results of my service life, salvage analysis, and subsequent development of  
22 proposed depreciation rates as of December 31, 2007 (historical) and December 31,  
23 2009 (future).

1 **Q. Please briefly describe the information included in your Depreciation Study.**

2 **A.** The Study is divided into nine sections. Two key portions are Sections 2 and 4.  
3 Section 2 includes the summary schedules listing the present and proposed  
4 depreciation rates for each depreciable property group and other depreciation rate  
5 development schedules. Section 4 contains a narrative describing the factors  
6 considered in selecting service life parameters for PEF's property. The various other  
7 sections of the Study contain detailed information and/or documentation supporting  
8 the schedules contained in Sections 2 and 4. A table of contents lists the complete  
9 contents of the Study. In addition, Section 1 contains a brief narrative summary or  
10 overview of the entire report. Section 3 includes a description of the generally  
11 accepted industry standard depreciation methods, procedures, and techniques that I  
12 utilized in the Depreciation Study.

13  
14 **Q. Was your depreciation analysis of PEF's depreciable plant in your Study**  
15 **prepared using the generally accepted, standard depreciation methods,**  
16 **procedures, and techniques you have described here and in your Study?**

17 **A.** Yes, and I also have prepared the Depreciation Study consistent with the requirements  
18 of Commission Rules 25-6.0436 and 25-6.04361, F.A.C.

19  
20 **Q. What steps were involved in preparing the Depreciation Study?**

21 **A.** My comprehensive depreciation analysis included a detailed analysis of PEF's fixed  
22 capital books and records through December 31, 2007. Depreciation study analysis  
23 procedures require that the detailed analysis be completed as of the end of PEF's fiscal

1 year, hence, the depreciation study was completed based upon historical data and  
2 surviving investments through December 31, 2007.

3 All of the historical data utilized in the course of performing the detailed  
4 service life and salvage study were obtained from PEF's books and records. Historical  
5 vintaged data (additions, retirements, adjustments, and balances) were obtained for  
6 each depreciable property group. PEF's historical investment cost records for each  
7 account were assembled into a depreciation database upon which detailed service life  
8 and salvage analysis were performed using standard depreciation procedures.

9 The development of the observed life tables from the historical information  
10 was completed by grouping like aged investments within each property category and  
11 identifying the level of retirements that occur through each successive age to develop  
12 the applicable observed life tables. The resulting observed lives were then fitted to  
13 standard Iowa Curves to estimate each property group's estimated future average  
14 service life. Likewise, the net salvage database was used as a basis to identify  
15 historical experience and trends and to determine each property group's estimated  
16 future net salvage factors. This was accomplished by preparing various three-year  
17 rolling band analyses of salvage components as well as a forecast based on PEF's  
18 historical salvage experience.

19 In addition, the Company's estimated proforma January 1, 2008 to December  
20 31, 2009 activity was used along with the underlying depreciation parameters to arrive  
21 at the proposed December 31, 2009 depreciation rates. PEF's test year in the current  
22 base rate proceeding is the year 2010. Accordingly, the Company's proposed  
23 depreciation rates were projected forward from the end of the historical period on

1 December 31, 2007 to reflect the level of plant in service and depreciation reserve  
2 estimated to be in place as of December 31, 2009, using the two years of pro forma  
3 (estimated) plant in service and depreciation activity between December 31, 2007 and  
4 December 31, 2009.

5 These pro forma adjustments were accomplished by adding the activity  
6 (estimated additions and retirements) to the December 31, 2007 plant in service to  
7 arrive at the December 31, 2009 plant in service. See Section 2, Table 3F\_Future,  
8 Exhibit No. \_\_\_\_ (EMR-2). The presently approved depreciation rates were used  
9 together with the estimated 2008 and 2009 yearly average plant balances to develop  
10 estimated 2008 and 2009 depreciation provision amounts for each property group and  
11 sub-group. These calculations are set forth on Table 3F\_Future in Section 2 of Exhibit  
12 No. \_\_\_\_ (EMR-2). The December 31, 2007 book depreciation reserve was then  
13 projected forward by adding the estimated 2008 and 2009 annual depreciation  
14 provision along with the deduction of the estimated 2008 and 2009 retirements (See  
15 Exhibit No. \_\_\_\_ (EMR-2), to arrive at the estimated book depreciation reserve as of  
16 December 31, 2009. These calculations are set forth in Table 4F\_Future, Section 2 of  
17 Exhibit No. \_\_\_\_ (EMR-2).

18 The December 31, 2009 plant in service surviving balances, as updated, were  
19 used to calculate the applicable average remaining lives. The underlying depreciation  
20 parameters used to complete the calculations were the depreciation parameters  
21 developed from the data through December 31, 2007 and resulting historic December  
22 31, 2007 depreciation rates. Likewise, the net salvage factors estimated from the  
23 analysis of the data through December 31, 2007 were used in calculating the proposed

1 December 31, 2009 annual depreciation rates.

2  
3 **Q. What are the most notable changes in annual depreciation rates and expense**  
4 **between the present and proposed depreciation rates as of the proforma date of**  
5 **December 31, 2009?**

6 **A.** The most notable changes in depreciation expense occurred in (1) Account 312 -  
7 Steam Boiler Plant Equipment; (2) Account 322 - Nuclear Reactor Plant Equipment;  
8 (3) Account 343 - Other Production Prime Movers; (4) Account 355 - Poles and  
9 Fixtures; (5) Account 362 - Station Equipment; (6) Account 364 - Distribution Poles,  
10 Towers and Fixtures; (7) Account 365 - Distribution Overhead Conductors & Devices;  
11 (8) Account 368 - Line Transformers; and (9) Account 370 - Meters. See Section 1,  
12 Table 1F-ProForma of Depreciation Study, Exhibit No. \_\_\_\_ (EMR-2).

13  
14 **Q. Please explain the change in Account 312-Boiler Plant Equipment.**

15 **A.** The proposed depreciation rate for Account 312 - Boiler Plant Equipment, increased  
16 from 3.17 percent to 4.40 percent. The basic factors influencing the proposed annual  
17 depreciation rate for this account are the developed interim retirement rate, the  
18 probable retirement years, the estimated interim net salvage factors, and the current  
19 level of accrued depreciation reserve updated using proforma activity data. The  
20 interim retirement rates were developed based upon a detailed analysis of the  
21 historically experienced retirements, and are designed to recognize the level of interim  
22 retirements that are anticipated to occur from the study date until the probable  
23 retirement date of each facility. The estimated terminal or probable retirement years

1 for each of the Company's operating units were developed by Company management  
2 after considering all factors affecting the current and prospective operation of the  
3 facilities as well as production requirements. The interim net salvage was based upon  
4 an analysis of the Company's historical experience, consideration of the prepared net  
5 salvage forecast, plus current and prospective factors. Individual plant site  
6 depreciation rates are set forth on, in addition to the FERC account level depreciation  
7 rate, Table 1F-Proforma, Section 2 of the Depreciation Study, Exhibit No. \_\_\_\_ (EMR-  
8 2).

9

10 **Q. Please explain the change in Account 322-Nuclear Reactor Plant Equipment.**

11 A. The proposed depreciation rate for Account 322 - Nuclear Reactor Plant Equipment,  
12 increased from 2.24 percent to 4.10 percent. Similar to the Steam Production analysis,  
13 the basic factors influencing the proposed annual depreciation rate for the Nuclear  
14 accounts are the developed interim retirement rate, the probable retirement years, the  
15 estimated interim net salvage factors, and the current level of accrued depreciation  
16 reserve updated using proforma activity data. The interim retirement rates were  
17 developed based upon a detailed analysis of the historically experienced retirements,  
18 and are designed to recognize the level of interim retirements that are anticipated to  
19 occur from the study date until the probable retirement date of the Company's facility.  
20 In addition, the interim net salvage was based upon an analysis of the Company's  
21 historical experience.

22 The estimated terminal or probable retirement year for the Company's  
23 operating unit is based upon the anticipated license expiration date of 2036 for the

1 Crystal River Unit Number 3 plant. During 2009 the Company will be expending  
2 approximately \$300 million of additional investment to upgrade the existing  
3 embedded property. The addition of this large additional investment to the embedded  
4 property with a fixed license expiration date of the probable retirement is the primary  
5 driver behind the depreciation rate change for the account. Individual plant site  
6 depreciation rates are set forth on, in addition to the FERC account level depreciation  
7 rate, Table 1F-Proforma, Section 2 of the Depreciation Study, Exhibit No. \_\_\_\_ (EMR-  
8 2).

9  
10 **Q. Please explain the change in Account 343-Prime Movers.**

11 A. The depreciation rate for Account 343 - Prime Movers increased from 3.74 percent to  
12 4.66 percent. The drivers for the depreciation rate change for this account are the  
13 result of life changes for several of the operating units. However, the primary driver  
14 behind the overall account level depreciation rate change is the \$632 million  
15 investment for the Bartow combined cycle plant that will be coming on line during  
16 2009. Contributing to a significantly less degree of the depreciation rate change is a  
17 reduction in the level of estimated account level interim negative net salvage percent  
18 as well as a change in the estimated interim retirement rate. Individual plant site  
19 depreciation rates are set forth on, in addition to the FERC account level depreciation  
20 rate, Table 1F-Proforma, Section 2 of the Depreciation Study, Exhibit No. \_\_\_\_ (EMR-  
21 2).

22  
23 **Q. Can you explain the change in Account 355-Transmission Poles and Fixtures?**

1 A. Yes. The depreciation rate for Account 355 – Transmission Poles and Fixtures  
2 increased from 2.72 percent to 4.14 percent. The increase of the deprecation rate for  
3 this property group is the result of incorporating a slightly shorter average service life  
4 thirty-eight (38) years as opposed to the present underlying average service life of  
5 forty (40) years and a change in estimated future net salvage from negative twenty-  
6 five (25) percent to negative fifty (50) percent.

7  
8 **Q. Please explain the change in Account 362-Distribution Station Equipment.**

9 A. The depreciation rate for Account 362 - Station Equipment decreased from 2.57  
10 percent to 1.83 percent. The decrease of the deprecation rate for this property group is  
11 principally the result of incorporating a longer average service life sixty (60) years as  
12 opposed to the present underlying average service life of forty-five (45) years and the  
13 resulting average remaining life into the depreciation rate.

14  
15 **Q. Please explain the change in Account 364-Distribution Poles, Towers & Fixtures.**

16 A. The depreciation rate for Account 364 - Poles, Towers & Fixtures increased from 3.86  
17 percent to 5.91 percent. The proposed depreciation rate is the product of a revision to  
18 the estimated future net salvage, which was revised from negative thirty-five (35) to  
19 negative fifty (50) percent, and extending the estimated average service life for the  
20 property group from twenty-eight (28) to twenty-nine (29) years. Over the last several  
21 years negative net salvage activity has escalated significantly and such activity can be  
22 anticipated to continue to occur at high levels in the future.

23



1 **Q. Please explain the change in the depreciation rate for Account 365-Distribution**  
2 **Overhead Conductors and Devices.**

3 A. The composite depreciation rate for Account 365 - Overhead Conductors and Devices  
4 increased from 2.66 percent to 3.59 percent. The increase of the deprecation rate for  
5 this property group is principally the result of incorporating a greater level of future  
6 negative net salvage from the current underlying negative fifteen (15) percent to a  
7 negative forty-five (45) percent net salvage. Offsetting the increase of negative net  
8 salvage is an increase in the average service life from a thirty-three (33) to a thirty-six  
9 (36) year life and its incorporation into the resulting average remaining life.

10  
11 **Q. Please explain the change in Account 368-Distribution Line Transformers.**

12 A. The depreciation rate for Account 368 - Line Transformers increased from 3.38  
13 percent to 3.96 percent. This depreciation rate increase is the combined product of  
14 incorporating the increased estimated average service life (an increase from twenty-six  
15 (26) to twenty-seven (27) years), and an increase in negative net salvage factors from  
16 negative five (5) percent to negative fifteen (15) percent identified through an analysis  
17 of the Company's historical experience and future expectations.

18  
19 **Q. Finally, will you explain the change in Account 370-Meters?**

20 A. Yes. The depreciation rate for Account 370 - Meters increased from 3.57 percent to  
21 8.85 percent. The increase of the depreciation rate for this property group is the  
22 product of the incorporation of an eighteen (18) year average service life, as opposed  
23 to the present underlying twenty-six (26) average service life, and an increase in the

1 negative net salvage percent from the current underlying negative eight (8) percent to  
2 negative ten (10) percent. The overwhelming driver behind the depreciation rate  
3 change is the fact that with the high levels of recent plant retirements, the Company's  
4 book depreciation reserve for this account is currently negative. The inclusion of the  
5 current level of the Company's book depreciation reserve causes the proposed  
6 depreciation rate to increase significantly to recover the under recovered cost over the  
7 average remaining life of the property investment.

8  
9 **Q. What factors influence the determination of the recommended annual**  
10 **depreciation rates included in your Depreciation Study?**

11 **A.** The depreciation rates reflect four principal factors: (1) the plant-in-service by vintage,  
12 (2) the book depreciation reserve, (3) the future net salvage, and (4) the composite  
13 remaining life for the property group. Factors considered in arriving at the service life  
14 are the average age, realized life, and the survival characteristics of the property. The  
15 net salvage estimate is influenced by both past experience and future estimates of the  
16 cost of removal and gross salvage amounts.

17  
18 **Q. Why are net salvage factors included in the determination of depreciation rates?**

19 **A.** Net salvage is the difference between gross salvage, or the proceeds received when an  
20 asset is disposed of, and the cost of removing the asset from service. Net salvage is  
21 said to be positive if gross salvage exceeds the cost of removal. If the cost of removal  
22 exceeds gross salvage, the result is negative salvage. Many retired assets generate  
23 little, if any, positive salvage. Instead, numerous PEF asset groups generate negative

1 net salvage at the end of their lives due to the cost of removal.

2 The cost of removal includes costs such as demolishing, dismantling, tearing  
3 down, disconnecting, or otherwise retiring or removing plant, as well as any  
4 environmental clean up costs associated with the property. Net salvage includes any  
5 proceeds received from any sale of plant.

6 Net salvage experience is studied for a period of years to determine the trends  
7 which have occurred in the past. These trends are considered, together with any  
8 changes that are anticipated in the future, to determine the future net salvage factor for  
9 remaining life depreciation purposes. The net salvage percentage is determined by  
10 comparing the total net positive or negative salvage to the book cost of the property  
11 investment retired.

12

13 **Q. Is there a method to determining net salvage?**

14 A. Yes. The method used to estimate the retirement cost is a standard analysis approach  
15 which is used to identify PEF's historical experience with regard to what the end of  
16 life cost will be relative to the cost of the plant when first placed into service. This  
17 information, along with knowledge about the average age of the historical retirements  
18 that have occurred to date, allows an estimation of the level of retirement cost that will  
19 be experienced by PEF at the end of each property group's useful life. The study  
20 methodology utilized has been extensively set forth in depreciation textbooks and has  
21 been the accepted practice by depreciation professionals for many decades.

22 Furthermore, the cost of removal analysis is the current standard practice used  
23 for mass assets by essentially all depreciation professionals in estimating future net

1 salvage for the purpose of identifying the applicable depreciation rate for a property  
2 group. There is a direct relationship between the installation of specific plant and its  
3 corresponding removal. The installation is its beginning of life cost while the removal  
4 is its end of life cost. Also, it is important to note that Average Remaining Life  
5 depreciation rates incorporate future net salvage which is typically more representative  
6 of recent versus long-term historical average net salvage.

7

8 **Q. How was this method applied?**

9 A. PEF's historical net salvage experience was analyzed to identify the historical net  
10 salvage factor for each applicable property group. As in this case, this analysis  
11 routinely finds that historical retirements have occurred at average ages significantly  
12 shorter than the property group's average service life. The occurrence of historical  
13 retirements at an age which is significantly younger than the average service life of the  
14 property category demonstrates that the historical data does not appropriately  
15 recognize the true level of retirement cost at the end of the property group's useful  
16 life. An additional level of cost to retire will occur due to the passage of time until all  
17 the current plant is retired at the end of its life. That is, the level of retirement costs  
18 will increase over time until the average service life is attained. The additional  
19 inflation in the estimate of retirement cost is related to those additional years' cost  
20 increases (primarily the result of higher labor costs over time) that will occur prior to  
21 the end of the property group's average life.

22 To explain, as a general principle, as property continues to age assets that  
23 typically generate positive salvage when retired will generate a lower percentage of

1 positive salvage as compared to the original cost of the property. By comparison, if  
 2 the class of assets is one that typically generates negative net salvage due to high cost  
 3 of removal and corresponding low gross end of life salvage with increasing age at  
 4 retirement, the negative net salvage percentage as compared to original cost will  
 5 typically be greater. This situation is routinely driven by the higher labor costs, for  
 6 example, that occur with the passage of time.

7 A simple example will aid in understanding the above net salvage analysis and  
 8 the required adjustment to the historical results. Assume the following scenario: PEF  
 9 has two cars, Car 1 and Car 2, each purchased for \$20,000. Car 1 is retired after 2  
 10 years and Car 2, is retired after 10 years. Accordingly, the average life of the two cars  
 11 is six (6) years. Car 1 generates 75% salvage or \$15,000 when retired and Car 2  
 12 generates 5% salvage or \$1,000 when retired.

	<u>Unit Cost</u>	<u>Ret. Age (Yrs)</u>	<u>%Salv.</u>	<u>Salvage Amount</u>
14 Car 1	\$20,000	2	75%	\$15,000
15 <u>Car 2</u>	<u>\$20,000</u>	10	5%	<u>\$1,000</u>
16 Total	\$40,000	6	40%	\$16,000

17 Assume an analysis of the experienced net salvage at year three (3). Based  
 18 upon the Car 1 retirement, which was retired at a young age (2 years) as compared to  
 19 the average six (6) year life of the property group, the analysis indicates that the  
 20 property group would generate 75% salvage. This indication is incorrect, however,  
 21 because it is the result of basing the estimate on incomplete data. That is, the estimate  
 22 is based upon the salvage generated from a retirement that occurred at an age which is  
 23 far less than the average service life of the property group. The actual total net salvage

1 that occurred over the average life of the assets, which experienced a six (6) year  
2 average life for the property group is 40%, as opposed to the initial incorrect estimate  
3 of 75%.

4 This is exactly the situation that occurs with the majority of PEF's historical  
5 net salvage data, except that most of PEF's property groups routinely experience  
6 negative net salvage as opposed to positive salvage.

7

8 **Q. Was PEF's historical data sufficient to determine appropriate net salvage rates**  
9 **for PEF's depreciable plant?**

10 A. Yes. PEF maintains historical aged retirement, salvage, and cost of removal data from  
11 which the net salvage method can be applied to determine appropriate net salvage  
12 rates. As with most utility plant records there are some anomalous data entries in  
13 various accounts but these have little to no bearing on the resulting net salvage  
14 analysis because (1) they are typically of very little value, especially compared to the  
15 total depreciable plant in the account, (2) they represent a relatively small percentage  
16 of the total accounting entries in the depreciable plant accounts, and (3) most  
17 importantly, they are typically many years old when the most relevant data is the most  
18 recent experience and what the expected experience will be. In determining the  
19 appropriate net salvage rates to ensure that customers pay their fair share of not only  
20 the plant they are consuming but the cost to retire that plant at the end of its life, the  
21 greater weight of the net salvage analysis is placed on the most recent and expected  
22 experience in the property account. In this way, the net salvage rates fairly account for  
23 the future cost to remove the plant, after salvage, as well as its retirement.

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23

**Q. Does your Depreciation Study compare PEF's historical data to the service life parameters you are proposing for your recommended annual depreciation rates?**

A. Yes. PEF's historical plant account records included vintaged retirement data and, therefore, were studied using the Retirement Rate Method. The resulting observed life tables and plottings of the selected Iowa Curves are contained Section 5 of the Study in Exhibit No. \_\_\_\_ (EMR-2). The service life parameters and resulting plant account annual depreciation rates were developed using the generally accepted, standard depreciation methods, procedures, and techniques that I have described in my testimony and in Section 3 of the Study in Exhibit No. \_\_\_\_ (EMR-2) to my testimony.

**Q. What is your professional opinion with regard to the results of the Depreciation Study that you prepared?**

A. In my opinion, the proposed depreciation rates resulting from the completed comprehensive depreciation study are reasonable, fair, and appropriate given that they incorporate the service life and net salvage parameters currently anticipated for each of PEF's property group investments over their average remaining lives, consistent with generally accepted, standard utility depreciation methods, procedures, and techniques. It is my recommendation, therefore, that the proposed depreciation rates set forth in my Depreciation Study should be uniformly and prospectively adopted by the Commission for regulatory purposes as well as by PEF for accounting purposes. Applying these rates to the December 31, 2009 depreciable plant in service results in an annual depreciation expense of \$445,613,594, which is an increase of \$97,355,430

1 from the current depreciation rate level.

2

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

4 **A.** Yes, it does.



**PROFESSIONAL QUALIFICATIONS  
OF  
EARL M. ROBINSON, CDP  
AUS CONSULTANTS**

Experience includes approximately 40 years of service in the public utility field. Mr. Robinson has performed services in the areas of depreciation, original cost, valuation, cost of service, and bill analysis within numerous regulatory jurisdictions and property tax agencies throughout the Eastern, Midwestern, Southwestern, and Pacific regions of the United States, Canada plus various areas of the Caribbean.

**EXPERIENCE**

**1977 to Date**

AUS Consultants. Various positions - currently Principal & Director. Mr. Robinson has prepared studies and coordinated analysis related to valuation, depreciation, original cost, trended original cost, cost of service, bill analysis, as well as analysis of expenses, revenues and income for various municipal and an extensive number of investor-owned electric, gas, water, wastewater, and telecommunications utilities.

Studies prepared have required the review of company records, inspection of property, the preparation of property inventories and original costs, preparation and review of mortality studies, selection of proper service lives, life characteristics and analysis of salvage, and analysis of capital recovery impact of changing depreciation methods.

During his many years of experience, Mr. Robinson has been involved in and/or responsible for an extensive quantity of comprehensive depreciation studies. Numerous early year's depreciation studies were prepared manually without the convenience of computer software systems. Subsequent, during the mid/late 1970's, Mr. Robinson became responsible for the completion of the many depreciation studies performed for the firm's clients. As part of that responsibility, Mr. Robinson was involved in not only performing the studies, but also in assisting AUS Consultants' MIS department in developing and testing various computer depreciation models. The studies performed by Mr. Robinson or under his direction have included all types of utilities, including electric, gas, water, wastewater, and telecommunications. During Mr. Robinson's career he has been involved in the preparation of more than a hundred depreciation related projects.

A Certified Depreciation Professional (CDP), Mr. Robinson, as a Principal & Director of AUS Consultants provides services to the firm's clients with regard to depreciation and cost based valuation issues. With more than forty (40) years' experience, he began his career as a staff member of the Plant Accounting Department of United Telephone (now Sprint) Eastern Group Headquarters subsequent to which he has spent the past thirty-five (35) plus years, as a consultant, preparing depreciation and valuation studies for gas, pipeline, electric, telecommunications, water, and wastewater utilities. In conjunction with the provision of these services, Mr. Robinson has testified on many occasions before numerous regulatory agencies (including state, federal, and property tax agencies throughout the U.S., Canada, and the Caribbean in support of the many studies completed for his diverse list of clients. In addition he has negotiated depreciation rates with various state regulatory agencies, the FCC Staff, and the FERC Staff. Mr. Robinson has also participated in several FCC, State, Company three-way depreciation re-prescription meetings.

With regard to valuation matters Mr. Robinson has been involved with the development of cost indexes from the earliest part of his career through the present. During his earlier years, he assisted and/or developed and utilized cost indexes to prepare reproduction cost and related fair value determinations for various of the firm's regulated utility clients. Subsequently, he attained extensive experience in preparing custom indexes, replacement cost, and depreciated replacement cost studies, having been responsible for preparing many such cost studies relative to various clients within the telecommunications industry during

**PROFESSIONAL QUALIFICATIONS  
OF  
EARL M. ROBINSON, CDP  
AUS CONSULTANTS**

the past twenty (20) plus year period.

He is also responsible for developing and publishing the firm's AUS Telephone Plant Index (successor to the Handy Whitman and C A Turner Telephone Construction Cost Index), a reproduction cost index subscribed to by various operating companies, regulatory agencies, and consultants.

Mr. Robinson is a founding member and past President of the Society of Depreciation Professionals, a professional organization that provides depreciation training, as well as provides a forum for discussion of depreciation issues. He is also a member of the American Gas Association (AGA) Accounting Services Committee and past chairman of the Statistics, Bibliography, Court Regulatory Sub-Committee of the AGA Depreciation Committee. As a member of that organization, he co-authored a publication entitled "An Introduction to Net Salvage of Public Utility Plant". Mr. Robinson has completed various previous presentations on the subject of depreciation studies as well as depreciated replacement cost to industry organizations and to property tax appraiser staffs.

1975 to 1977

Gannett, Fleming, Corddy & Carpenter, Inc. Valuation Analyst in the Valuation Division where his duties and responsibilities included the classifications, analysis and coordination of data in the development of depreciation rates for various companies including telephone, gas, water and electric utilities.

1971 to 1975

Weber, Fick & Wilson (Acquired by AUS Consultants), Public Utility Analyst engaged in the unitization and subsequent application of costs in the pricing of inventories for original cost determination, depreciation and salvage studies to determine proper annual depreciation rates and trended original cost studies used in the determination of utility rate base.

1966 to 1971

United Telephone Company of Pennsylvania (now Sprint/United Telephone Company of Pa.). As a staff member of the Plant Accounting Department, his duties and responsibilities included various plant accounting ledgers, unitization of location and mass property accounts, as well as special studies related to insurance and tax valuations of utility plant in service.

**TESTIMONY**

Jurisdictions testified in include Alberta, Arizona, California, Connecticut, Delaware, District of Columbia, FERC, Florida, Indiana, Illinois, Iowa, Kansas, Kentucky, Maryland, Massachusetts, Montana, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Oklahoma, Pennsylvania, Rhode Island, South Carolina, Tennessee, Utah, and Virgin Islands. Extensive expert testimony has been presented on the subjects including Depreciation, Capital Recovery, Plant in Service Measures of Value, Depreciated Reproduction Cost, and Depreciated Replacement Cost. Numerous additional depreciation studies have been completed and filed in various different jurisdictions for which testimony appearances were not required.

**PROFESSIONAL QUALIFICATIONS  
OF  
EARL M. ROBINSON, CDP  
AUS CONSULTANTS**

**PERSONAL**

**Education:**

Graduate of Harrisburg Area Community College with an Associate of Arts Degree in Accounting, and has undertaken further studies at University Center of Harrisburg. Successfully completed numerous programs related to service life and salvage estimation, forecasting, and evaluation sponsored by Depreciation Programs, Inc. at Calvin College Campus, Grand Rapids, Michigan. In addition, Mr. Robinson successfully completed cost of service seminars sponsored by the American Water Works Association. He received his CDP (Certified Depreciation Professional) designation by Exam during 1996.

**List of Clients Served**

**CATV**

Storer Broadcasting Company  
(DE, MD, MN)

Cable Television Consortium

**ELECTRIC**

Atlantic City Electric d/b/a Conectiv Power Delivery  
Borough of Butler - Electric Dept.  
Conectiv Power Delivery  
Consolidated Edison Co of NY  
Consolidated Hydro, Inc.  
Delmarva Power and Light Company  
Delaware  
Maryland  
Duquesne Light Company  
Hershey Electric Company  
Kentucky Utilities  
Lockhart Power Company

Louisville Gas & Electric Co. - Elec. Div.  
Montana - Dakota Utilities Co - Elec. Div

Nantahala Power and Light Company  
New York State Electric and Gas Corp  
Northern Indiana Public Service Co  
Pennsylvania Power Company  
Philadelphia Electric Company  
Potomac Electric Power Company  
Maryland  
Washington DC  
Progress Energy - Carolina.  
Progress Energy - Florida  
Public Service Company of New Mexico  
Rochester Gas and Electric Corporation  
Wellsboro Electric Company  
Vermont Electric Power, Inc

**GAS**

ATCO Gas  
ATCO Pipelines  
Atlanta Gas Light Company  
Bay State Gas Company  
C & T Enterprises, Inc.  
Valley Cities Waverly Gas Company  
Canadian Western Natural  
Gas Company Limited  
Citizens Gas & Coke Utility  
Columbia Gas of Pennsylvania, Inc.

North Carolina Gas Service  
North Penn Gas  
Northern Indiana Public Service Co.  
Northern Utilities, Inc.-Maine  
Northern Utilities, Inc.-New Hampshire  
Oklahoma Natural Gas Company  
Pacific Gas & Electric Company  
Paiute Pipeline  
Pennsylvania Gas & Water Company  
PG Energy Inc.

**PROFESSIONAL QUALIFICATIONS  
OF  
EARL M. ROBINSON, CDP  
AUS CONSULTANTS**

Connecticut Natural Gas Corporation  
Consolidated Edison Co of New York  
East Ohio Gas  
Elkton Gas Service  
Granite State Gas Transmission, Inc.  
Great Plains Natural Gas Co.  
Kansas Gas Service  
Louisville Gas & Electric Co. - Gas Division  
Montana Dakota Utilities - Gas Division  
National Fuel Gas Distr. Corp., NY  
National Fuel Gas Supply  
NICOR Gas Company

Pennsylvania and Southern Gas Company  
Valley Cities Division  
Waverly Division  
Pipeline Industry Group  
Providence Gas Company  
Public Service Electric & Gas Co.  
Roanoke Gas Company  
Rochester Gas and Electric Corporation  
Saxonburg Heat & Light Company  
Southern Connecticut Gas Company  
Southwest Gas Corporation  
T.W. Phillips Gas & Oil Company  
Williams Companies

GENERAL CLIENTS

Arthur Andersen  
Pricewaterhouse Coopers

Ernst & Young  
Standard & Poors

REGULATORY AND GOVERNMENTAL

Arizona Corporation Commission  
Mountain States Telephone & Telegraph  
Southwest Gas Corporation  
Baltimore County, MD  
Bensalem Township - Water  
Bethlehem Authority - Water  
Borough of Butler, NJ  
Borough of Media Water Works  
City of New Orleans, LA  
Delaware Public Service Commission  
Delaware River Port Authority

Diamond State Telephone Company  
Kansas Corporation Commission  
Southwest Bell  
Public Service Comm. of Nevada  
Nevada Bell  
Town of Waterford, CT  
Northeast Utilities  
Washington, D.C. - PSC  
C&P Telephone Company  
Potomac Electric Power Company

TELECOMMUNICATIONS

Ace Telephone Association - IA & MN  
AirTouch Communications  
ALLTEL Pennsylvania, Inc.  
AT&T-Advance Solutions, Inc-CA  
BellSouth Telecommunications  
Buffalo Valley Telephone Company  
Cellular Industry Study Group  
AT&T Wireless  
BellSouth Communications  
GTE Mobilnet  
Brighthouse Networks-Citrus County  
Cable & Wireless  
Chenango & Unadilla Telephone Company  
Cingular Wireless  
Cingular Wireless - California  
Cingular Wireless - Houston

Paging Industry Study Group  
AirTouch Paging  
Mobile Comm  
Paging Network, Inc.  
Skytel  
USA Mobile Communications  
Quaker State Telephone Company  
Qwest Communications Corporation  
Qwest - Arizona  
Qwest - Iowa  
Qwest - Montana  
Qwest - Washington  
RCA Global Communications, Inc.  
SBC Ameritech Corporation  
SBC - Arkansas  
SBC - Kansas

**PROFESSIONAL QUALIFICATIONS  
OF  
EARL M. ROBINSON, CDP  
AUS CONSULTANTS**

Cingular Wireless - Massachusetts  
Commonwealth Telephone Company  
CTC of Michigan  
CTC of Virginia  
Denver & Ephrata Telephone & Telegraph Co.  
D & E Network  
D & E System  
Embarq Florida, Inc.  
Empire Telephone Corporation  
Illinois Consolidated Telephone Co.  
Jamestown Telephone Corporation  
Leesport Telephone Company  
Lewisberry Telephone Company  
Los Angeles Cellular Telephone Co.  
MCI International, Inc.  
MCI Telecommunications Corp.  
MFS Communication Company, Inc.  
Marianna & Scenery Hill Tel. Co.  
Mid State Telephone Company  
Motorola, Inc.  
Nevada Bell  
New Jersey Telephone Company  
The North-Eastern Pennsylvania Tel. Co.  
Pacific Bell  
Pactel Cellular

SBC -- Michigan  
SBC -- Missouri  
SBC -- Ohio  
SBC -- Oklahoma  
SBC -- Wisconsin  
SBC -- West -- California  
SBC -- West -- Nevada  
Southwestern Bell Telephone Company  
Standard Telephone Company  
Telecommunications d'Haiti  
Telephone Utilities of Pennsylvania  
United Telephone Company of New Jersey  
Verizon Wireless  
Verizon -- California  
Verizon -- Kentucky  
Verizon -- Massachusetts  
Verizon -- Montana  
Verizon -- South Carolina  
Verizon -- Utah  
Verizon -- Washington  
Verizon -- Wyoming  
Verizon -- Total Company  
Virgin Islands Telephone Corporation  
Williams Communication  
WiiTel, Inc.

WATER

Artesian Water Company  
City of Auburn  
Bethlehem Authority - Water  
California Water Service Company  
California-American Water Company  
Citizens Water - California  
Citizens Water - Arizona  
Clinton Water Company  
Columbia Water Company  
Commonwealth Water Company  
Consumers New Jersey Water Company  
Dauphin Consolidated Water Supply Co.  
Dominguez Water Company  
Elizabethville Water Company  
City of Fairfax  
Garden State Water Company  
Hackensack Water Company  
Hershey Water Company  
Illinois-American Water Company  
Indian Rock Water Company  
Indianapolis Water Company  
Iowa-American Water Company  
Keystone Water Company  
Manufacturers Water Company  
Masury Water Company  
Middlesex Water Company

New Mexico-American Water Company, Inc.  
Newtown Artesian Water Company  
New York-American Water Company  
Ohio-American Water Company  
Palm Coast Utility Corporation  
Pennichuck East Utility  
Pennichuck Water Works  
Pennsylvania-American Water Company  
Pennsylvania Gas and Water Company  
Pennsylvania Water Company  
Erie & Sayre Divisions  
Philadelphia Suburban Water Company  
Pinelands Water Company  
Public Service Water Company  
Riverton Consolidated Water Company  
Roaring Creek Water Company  
Rock Springs Water Company  
Shenango Valley Water Company  
Southern California Water Company  
Spring Valley Water Company  
Tidewater Utilities, Inc.  
United Water - Delaware  
United Water - Toms River  
United Water - New Jersey  
United Water - Pennsylvania  
United Water - Virginia

**PROFESSIONAL QUALIFICATIONS  
OF  
EARL M. ROBINSON, CDP  
AUS CONSULTANTS**

Monmouth Consolidated Water Company  
New Haven Water Company  
New Jersey Water Company

Virginia American Water Company  
Western Pennsylvania Water Company  
York Water Company

STEAM

Consolidated Edison Co of New York

WASTEWATER

California - American Water Company  
Citizens Sewer – Arizona  
Illinois-American Company -- Wastewater  
New Jersey Water Company  
Sewer Districts

Palm Coast Utility Corporation  
Pinelands Sewer Company  
Wynnewood Sewer Company

**PROFESSIONAL QUALIFICATIONS**

CDP (Certified Depreciation Professional) by Exam during October, 1996

**PROFESSIONAL AFFILIATIONS**

American Water Works Association  
American Gas Association  
American Railway Engineering Association  
Pennsylvania Gas Association  
Pennsylvania Municipal Authorities Association  
Member AGA Accounting Services Committee  
Society of Depreciation Professionals-Founding Member, Chairman Coordinating and Membership Committees,  
Treasurer, President, and Past President

**PUBLICATIONS**

AGA/EEI Depreciation Accounting Committee, Contributing Author 1989, "An Introduction to Net Salvage of Public Utility Plant"

"Replacement Cost and Service Life Studies", *Journal of Property Tax Management*, Fall 1994, Volume 6, Issue 2

**SPEECHES AND PRESENTATIONS**

"*Depreciated Replacement Cost*", Institute of Property Taxation - 18th Annual Conference, San Francisco, CA

"*RCNLD Issues for Utilities*", The National Association of Railroad & Public Utilities Tax Representative, 1997 Annual Conference, North Lake Tahoe, NV

"*Useful Service Lives of Cellular Industry Assets*", State of Florida, Department of Revenue, Industry/Government Task Force (April 1997)

"*Appraisal and Valuation Issues Associated with Technology Changes within the Wireless*

**PROFESSIONAL QUALIFICATIONS  
OF  
EARL M. ROBINSON, CDP  
AUS CONSULTANTS**

*Industry*, 30<sup>th</sup> Annual Wichita Program - Appraisal for Ad Valorem Taxation of Communications, Energy, and Transportation Program, Wichita State University - July 30-August 3, 2000

*"Physical/Functional Obsolescence, Residual Values/Floors (Net Salvage)"*, 32<sup>th</sup> Annual Wichita Program - Appraisal for Ad Valorem Taxation of Communications, Energy, and Transportation Program Wichita State University - July 28-August 1, 2002

*"Depreciation Study Preparation"*, AGA Accounting Services Committee/EEI Property Accounting & Valuation Committee, Lake Tahoe, Nevada - October 28, 2002

*"Use of Replacement Cost to Value High Tech Equipment"* Southeastern Association of Tax Administrators, 53<sup>rd</sup> Annual Conference, Savannah, Georgia - July 14-July 16, 2003

*"Property Tax: Use of Replacement Cost in the Appraisal of Telecommunications Companies"*, Western States Association of Tax Representatives (WSATR), WSATA 2003 Annual Meeting, Austin, TX - Sept. 9, 2003

*"Replacement Cost & Depreciated Replacement Cost Presentation"*, Southwestern Bell Telephone Company - Arkansas PSC - Tax Division - August, 2003

*"Valuation of Assets"*, AGA Accounting Services Committee/EEI Property Accounting & Valuation Committee, Scottsdale, Arizona - December 9, 2003

*"Property Tax: Use of Replacement Cost in the Appraisal of Telecommunications Companies"*, Oklahoma State Board of Equalization Public Service Valuation Guidelines Subcommittee - Oklahoma City, OK - Feb 5, 2004

*"Net Salvage Issues In Rate Cases"*, AGA Accounting Services Committee/EEI Property Accounting & Valuation Committee, San Antonio, Texas - May 17, 2004

*"Current Depreciation Issues: Point-Counterpoint"*, AGA Accounting Services Committee/EEI Property Accounting & Valuation Committee, Savannah, Georgia - November 14, 2006

*"Depreciation & Cost of Removal"*, AGA Accounting Services Committee/EEI Property Accounting & Valuation Committee, Tucson, Arizona - October 24, 2007

*"Whole Life versus Remaining Life"*, AGA Accounting Services Committee/EEI Property Accounting & Valuation Committee, San Francisco, California - May 21, 2008

*"Obsolescence-Measuring the Impact for Industries Experiencing Change"* *"Depreciation & Cost of Removal"*, IPT 32<sup>nd</sup> Annual Conference, Atlanta, Georgia, June 23, 2008

**PROFESSIONAL QUALIFICATIONS  
OF  
EARL M. ROBINSON, CDP  
AUS CONSULTANTS**

**SUMMARY OF TESTIMONY APPEARANCES – HEARINGS & DEPOSITIONS (PLUS DECLARATIONS)**

<u>Jurisdiction</u>	<u>Client</u>	<u>Docket/Application</u>	<u>Subject</u>
Alberta	Canadian Western Natural Gas Company Limited	980413	Depreciation
	ATCO Pipelines	1292783	Depreciation
Arizona	Arizona Corp. Comm./ Mtn. Bell	9981-E-1051	RCN/RCND *
	Arizona Corp. Comm./ Southwest Gas Corp.	U-1551-80-70	RCN/RCND *
	Qwest Corporation-Arizona	TX2001-000662	Property Tax Valuation Deposition
California (PUC & State Board of Equalization)	MCI Telecommunications Corporation	274	Replacement Cost/ Depr. Repl. Cost
		SAU87-38	Replacement Cost/ Depr. Repl. Cost
		SAU91-101	Replacement Cost/ Depr. Repl. Cost
	SBC-California	SAU 279	Property Tax Valuation Declaration
	SBC-California	January 31, 2005	Property Tax Valuation Declaration
	Southern California Water Company	ABJ-4	Depreciation
Connecticut	Southern Connecticut Gas Co.	89-09-06	P.I.S. Measures of Value and Depreciation
Delaware	Artesian Water Company	82-20 87-3	Depreciation Depreciation
	United Water - Delaware	96-164 98-98	Depreciation Depreciation
	Delaware Public Service Comm./ Diamond State Telephone Co.	81-8	P.I.S. Measures of Value and Depreciation
	Delmarva Power & Light Company	05-304	Depreciation
	Tidewater Utilities, Inc/ Public Water and Supply, Inc	99-466	Depreciation



**PROFESSIONAL QUALIFICATIONS  
OF  
EARL M. ROBINSON, CDP  
AUS CONSULTANTS**

<u>Jurisdiction</u>	<u>Client</u>	<u>Docket/Application</u>	<u>Subject</u>
District of Columbia	Potomac Electric Power Co.	F.C. 869	Depreciation
	Washington, DC PSC/C&P Tel Corp.	F.C. 777	Depreciation
	Washington, DC PSC/ Potomac Electric Power Co.	F.C. 785 F.C. 813	Capital Recovery/ Depreciation
FERC	Granite State Gas Transmission, Inc.	RP91-164-000	Depreciation
	Paiute Pipeline	RP96-306-000	Depreciation
Florida (County of Duval)	BellSouth Telecommunications	Petitions 1795-1800	Replacement Cost/ Depr. Repl. Cos
(County of Lee)	Sprint-Florida, Inc (Embarq)	Case No. 02-CA-013330-1	Replacement Cost
(County of St. Lucie)	BellSouth Telecommunications	1999 Petitions	Replacement Cost/ Depr. Repl. Cost
(County of Citrus)	Embarq	Case No. 2003-CA4473, 2004-CA4565, 2005-CA5010	Property Tax Valuation Deposition
(County of Lee)	Embarq	Case No. 02-13330 CA-WCM	Property Tax Valuation Deposition
	Progress Energy – Florida	050078-EI	Depreciation
Illinois	Illinois - American Water Company	00-0340 02-0690 07-0507	Depreciation Depreciation Depreciation
	Illinois Consolidated Telephone Co.	81-0264 82-0623	RCN/RCND * RCN/RCND *
Indiana	Northern Indiana Public Service Company	Cause No. 41746	Depreciation
Iowa (Dept of Rev)	Qwest Corporation-Iowa	883	Property Tax Valuation Deposition

**PROFESSIONAL QUALIFICATIONS  
OF  
EARL M. ROBINSON, CDP  
AUS CONSULTANTS**

<u>Jurisdiction</u>	<u>Client</u>	<u>Docket/Application</u>	<u>Subject</u>
Kansas	Kansas Gas Service	03-KGSG-602-RTS	Depreciation
Kentucky	Kentucky Utilities	Case No. 2003-00434	Depreciation
	Louisville Gas & Electric Electric Gas	Case No. 2003-00433	Depreciation
Maryland	Delmarva Power & Light Company	9093	Depreciation
	Potomac Electric Power Company	9092	Depreciation
Massachusetts	Bay State Gas Company	92-111 DTE 05-27	Depreciation Depreciation
Montana	Montana-Dakota Utilities Co-Elec	Docket # 2007.7.79	Depreciation
	Qwest Corporation-Montana	06DORFC001 06DOTFC017	Property Tax Valuation Deposition
Nevada	Southwest Gas Corporation	04-3011	Depreciation
New Jersey	Atlantic City Electric d/b/a Conectiv Power Delivery	ER03020110	Depreciation
	Borough of Butler/ Butler Elec. Dept.	792-84	Valuation of Plant in Service Customer Revenue and Purchase Power
	Commonwealth Water Co.	842-100	Depreciation
	Consumers NJ Water Company	WR00030174	Depreciation
	Garden State Water Co.	WR91091483	Depreciation
	Middlesex Water Company	WR8602-240 WR90080884J WR96110818	Depreciation Depreciation Depreciation
	Monmouth Cons. Water Co.	8312-1113	Depreciation
	New Jersey Water Company	834-292	Depreciation
	Public Service Electric & Gas	GR05100845	Depreciation

**PROFESSIONAL QUALIFICATIONS  
OF  
EARL M. ROBINSON, CDP  
AUS CONSULTANTS**

<u>Jurisdiction</u>	<u>Client</u>	<u>Docket/Application</u>	<u>Subject</u>
	United Water Resources (formerly Hackensack Water Co.)	8506-663 WR90080792J WR95070303	Depreciation Depreciation Depreciation
	Toms River Water Company	WR95050219	Depreciation
New Hampshire	Northern Utilities, Inc.	DR91-081	Depreciation
New Mexico	New-Mexico American Water Company, Inc.	2813 03-00206-UT	Depreciation Depreciation
New York	New York-American Water Co.	28911	Depreciation
	New York State El & Gas Corp. Electric Business & Common Plt	05-E-1222	Depreciation
	Spring Valley Water Co., Inc.	89-W-1151 92-W-0645	Depreciation Depreciation
North Carolina	Nantahala Power and Light Co.	E-13, SUB157	Depreciation
North Dakota	Montana-Dakota Utilities Co-Gas	Case No. PU-399-02-183	Depreciation
Oklahoma (State Board of Equalization)	SWBT-Oklahoma	EQ-2004-10	Property Tax Valuation Deposition
Pennsylvania	Borough of Media Water Works	R-912150	Depreciation
	Columbia Gas of Penna.	R-80031129	Depreciation and Valuation
	Commonwealth Telephone Co.	I-00920020	Depreciation
	Keystone Water Company	R-842755 R-842756 R-842759	Capital Recovery/Depreciation Capital Recovery/Depreciation Capital Recovery/Depreciation
	Mid Penn Tel. Corp.	R-80071264	Depreciation
	Penna.-American Water Co.	R-891208	Depreciation
	Penna. Gas & Water Co. - Gas Division	R-821961 R-832475	Depreciation Depreciation

**PROFESSIONAL QUALIFICATIONS  
OF  
EARL M. ROBINSON, CDP  
AUS CONSULTANTS**

<u>Jurisdiction</u>	<u>Client</u>	<u>Docket/Application</u>	<u>Subject</u>
	Penna. Gas & Water Co. - Water Division	R-822102 R-850178 R-870853	Depreciation Capital Recovery/Depreciation Capital Recovery/Depreciation
	Penna. Gas & Water Co. - Scranton Division	R-901726 R-922482	PIS Meas. of Value/Depreciation Depreciation
	Penna. Gas & Water Co. - Spring Brook Division Nesbitt Service Area Crystal Lake Service Area	R-911966 R-922404	PIS Meas. of Value/Depreciation PIS Meas. of Value/Depreciation
	Ceasetown/Watres Service Area	R-93266	Depreciation
	Penna. Power Company	R-811510 R-821918 R-832409 R-842740 R-850267 R-870732	PIS Meas. of Value/Depreciation PIS Meas. of Value/Depreciation PIS Meas. of Value/Depreciation PIS Meas. of Value/Depreciation PIS Meas. of Value/Depreciation
	Pennsylvania & Southern Gas Company	R-870686	Depreciation
	PG Energy Inc.	R-963612 R-984280 R-00061365	PIS Meas. Of Value/Depr PIS Meas. Of Value/Depr PIS Meas. OF Value/Depr
	Philadelphia Suburban Water Company	R-911892 R-922476 R-932868	Depreciation PIS Meas. of Value/Depreciation PIS Meas. of Value/Depreciation
	Riverton Consolidated Water Co.	R-842675	Capital Recovery/Depreciation
	United Water - Pennsylvania	R-00973947	Depreciation
	Western Pennsylvania Water Company	R-842621 R-842622 R-842623 R-842624 R-842625	Capital Recovery/Depreciation Capital Recovery/Depreciation Capital Recovery/Depreciation Capital Recovery/Depreciation Capital Recovery/Depreciatio

**PROFESSIONAL QUALIFICATIONS  
OF  
EARL M. ROBINSON, CDP  
AUS CONSULTANTS**

<u>Jurisdiction</u>	<u>Client</u>	<u>Docket/Application</u>	<u>Subject</u>
	Wellsboro Electric Company	R-00016356	Depreciation
Rhode Island	Providence Gas Company	1914 2286	Depreciation Depreciation
South Carolina	Lockhart Power Company	87-435-E	Depreciation
Tennessee (Board of Equalization)	Bellsouth – Tennessee	67-5-903	Property Tax Valuation Deposition
Utah	Verizon Wireless	05-0826, 05-0829	Property Tax Valuation Deposition & Hearing
Virgin Islands	Virgin Islands Tel. Corp.	264 314 316	Depreciation Depreciation Depreciation
*	Reproduction Cost New/Reproduction Cost New Depreciated.		

**BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

---

In re: Petition for rate increase by  
Progress Energy Florida, Inc.

---

DOCKET NO. 090079-EI

Submitted for filing: March 20, 2009

**EXHIBIT NO. \_\_\_\_\_ (EMR-2)**

**Depreciation Study as of December 31, 2007**

**and**

**ProForma Depreciation Rates**

**As of December 31, 2009**

**Vols. 1 and 2 are filed separately due to volume**