

BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 050078-EI

In the Matter of

PETITION FOR RATE INCREASE BY
PROGRESS ENERGY FLORIDA, INC.



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VOLUME 4

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PROCEEDINGS: TECHNICAL HEARING

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

DATE: Wednesday, September 7, 2005

TIME: Commenced at 9:30 a.m.

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

REPORTED BY: JANE FAUROT, RPR
Official FPSC Hearings Reporter
(850) 413-6732

APPEARANCES: (As heretofore noted.)

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I N D E X

WITNESSES

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1 **I. STATEMENT OF QUALIFICATIONS OF JAMES A. ROTHSCHILD**

2 Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

3 A. My name is James A. Rothschild and my address is 115 Scarlet Oak Drive,
4 Wilton, Connecticut 06897.

5

6 Q. WHAT IS YOUR OCCUPATION?

7 A. I am a financial consultant specializing in utility regulation. I have experience in
8 the regulation of electric, gas, telephone, sewer, and gas utilities throughout the
9 United States.

10

11 Q. PLEASE SUMMARIZE YOUR UTILITY REGULATORY EXPERIENCE.

12 A. I am President of Rothschild Financial Consulting and have been a consultant
13 since 1972. From 1979 through January 1985, I was President of Georgetown
14 Consulting Group, Inc. From 1976 to 1979, I was the President of J. Rothschild
15 Associates. Both of these firms specialized in utility regulation. From 1972
16 through 1976, Touche Ross & Co., a major international accounting firm,
17 employed me as a management consultant. Touche Ross & Co. later merged to
18 form Deloitte Touche. Much of my consulting at Touche Ross was in the area
19 of utility regulation. While associated with the above firms, I have worked for
20 various state utility commissions, attorneys general, utility customers and
21 public advocates on regulatory matters relating to regulatory and financial

1 issues. These have included rate of return, financial issues, and accounting
2 issues. (See Appendix A, which has been identified as Exhibit __ (JAR-16).)

3
4 Q. WHAT IS YOUR EDUCATIONAL BACKGROUND?

5 A. I received an MBA in Banking and Finance from Case Western University
6 (1971) and a BS in Chemical Engineering from the University of Pittsburgh
7 (1967).

8 **II. PURPOSE**

9

10 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

11 A. I have been engaged by the Florida Office of Public Counsel to recommend the
12 appropriate capital structure and a fair cost of capital that the Commission
13 should employ in this case and to comment on the cost of capital testimony
14 filed by PEF Witness Dr. Vander Weide.

15

16 Q. ARE YOU SPONSORING ANY EXHIBITS TO YOUR TESTIMONY?

17 A. Yes. I am sponsoring Exhibit Nos. ___ (JAR-1 - 16), which support and
18 illustrate the points I develop in my testimony.

19 **III. SUMMARY OF FINDINGS AND RECOMMENDATIONS**

20

21 Q. PLEASE SUMMARIZE YOUR FINDINGS.

22 A. In my testimony I will develop the following points:

- 1 1. PEF seriously overreaches in its requests in the areas of capital structure and
2 return on equity. When one corrects for PEF's excesses in these areas alone,
3 the result is to more than offset the company's entire request for an increase
4 in base rate revenues. This is without considering any other needed
5 adjustments.
6
- 7 2. PEF proposes to employ a capital structure containing 63% equity, ostensibly
8 to support an upgrade by bond ratings agencies. While I disagree that a
9 higher rating for PEF either is needed or would benefit customers, the more
10 important point is that the proposed capital structure would require PEF
11 customers to subsidize Progress Energy Consolidated without providing any
12 real assistance in the form of enhanced rating agency review. This is because
13 Progress Energy's "problem" with rating agencies is—not the regulated
14 utility—but the weaker financial structure of the parent, which is the focus of
15 rating agency reviews of both entities.
16
- 17 3. PEF's request to impute additional equity in the capital structure to offset
18 "purchased power" improperly singles out one risk factor to the exclusion of
19 considerations that mitigate risk, while continuing to ignore the importance of
20 the parent's capital structure in rating agency determinations.
21
- 22 4. Dr. Van der Weide's proposal of 12.8% ROE is the product of a seriously and
23 demonstrably flawed application of the DCF and risk premium
24 methodologies.
25
- 26 5. To avoid requiring PEF's customers to subsidize PEF's parent, Progress
27 Energy, and separately to ensure that ratepayers receive at least some of the
28 benefits associated with fully protecting investors from storm damage risk, I
29 recommend that the Commission employ the parent's consolidated capital

1 structure for ratemaking purposes. This capital structure currently contains
2 41.8% common equity, 57.6% debt, and 0.5% preferred stock.

3
4
5 6. I recommend that Progress Energy Florida (PEF) be allowed an overall cost
6 of capital of 6.65%. This is based upon an overall cost of capital using a 9.10%
7 cost of equity, 5.73% cost of long-term debt, 4.04% cost of short-term debt and
8 4.58% cost of preferred stock. It is also based upon the actual consolidated
9 financial capital structure of parent Progress Energy that I have described and a
10 Florida regulatory basis capital structure as shown on Exhibit ____ (JAR 1), Page
11 2.

12
13 **IV. INTRODUCTION**

14
15 Q. HOW DOES YOUR OVERALL COST OF CAPITAL COMPARE TO THE
16 COST OF CAPITAL REQUESTED BY THE COMPANY?

17 A. From my experience, it is common for companies to overstate the cost of capital
18 when computing their overall revenue requirements. In this case, the Company's
19 requested cost of capital exceeds its true cost of capital significantly more than is
20 normally encountered. By over-allocating expensive common equity to the
21 regulated operations of PEF and through a series of inappropriate adjustments
22 proposed by company witness Mr. Portuondo, the Company has requested that its
23 cost of capital be computed using a financial capital structure containing 63.08%
24 common equity (Exhibit ____ (JAR-1)), p. 2) even though on a consolidated basis
25 (one that includes both regulated and unregulated operations), Progress Energy is

1 actually financed with a capital structure containing approximately 41.8%
2 common equity. (Exhibit (JAR-1)), page 1. The Company has coupled to this
3 request for a capital structure that contains an excessive level of common equity
4 a substantially overstated cost of equity request of 12.8%. The request is based
5 upon the already excessive 12.3% recommended by Dr. Vander Weide, which
6 was then increased by an additional 0.50% based on the desire of Dr. Cicchetti to
7 reward PEF for efficiency. Based upon the capital structure requested by the
8 Company, this 0.50% "reward" amounts to an additional rate increase of over
9 \$20 million per year. The "pre-award" value of 12.3 % is itself the subject of an
10 unwarranted upward adjustment. Dr. Vander Weide starts from a more
11 "normally" overstated cost of equity request of 11.4%, but then increases it based
12 upon claimed financial risk considerations -- even though, especially after
13 considering the benefits of eliminating storm-damage risk exposure, the
14 requested capital structure of PEF has far less financial risk than the capital
15 structures of other companies that purportedly serve as the basis for his
16 adjustment.

17 The combined effect of the very high cost of equity request and the
18 inappropriate capital structure computation would drive PEF's cost of capital
19 computation up to a grossly overstated 9.50% instead of the far more reasonable
20 result of 6.65% that I have recommended.

21

22 Q. HOW SIGNIFICANT IS THE IMPACT OF THE COMPANY'S OVERLY
23 AGGRESSIVE COST OF CAPITAL REQUEST?

1 A. As shown on Exhibit __ (JAR-1), page 4), the Company's requested cost of
2 capital is so overstated that if the company had not overreached in the area of cost
3 of capital it would have been requesting a \$35.4 million *rate decrease* instead of
4 the completely unnecessary \$205.6 million *rate increase* request. This rate
5 decrease of \$35.4 million is based on the impact of the requested cost of capital
6 alone. It does not consider any other adjustments that may be appropriate to the
7 Company's requested rate base or operating income at present rates.

8

9 Q. HAVE YOU EVER TESTIFIED IN ANOTHER RATE CASE IN WHICH
10 CHANGES YOU HAVE PROPOSED TO THE COST OF CAPITAL IN AND
11 OF THEMSELVES CHANGED THE REVENUE REQUIREMENT FROM A
12 LARGE INCREASE TO A MEANINGFUL RATE DECREASE?

13 A. No, not that I remember. The excessive nature of the cost of capital requested by
14 the Company in this case cannot be stressed enough.

15

16 Q. DOES OPC'S RECOMMENDATION IN THIS CASE ALLOW PEF TO
17 MAINTAIN ITS BBB BOND RATING?

18 A. Yes. The capital structure I have recommended is consistent with the actual
19 capital structure being used by Progress Energy to finance its operations and my
20 recommended cost of equity is consistent with the 9.0% return on equity Value
21 Line has projected Progress Energy will earn in 2008-2010. Therefore, even
22 though OPC's overall recommendation is for a very substantial rate reduction, the

1 returns PEF will earn that are consistent with OPC's recommendation will
2 provide the capital structure and coverage ratios that are already expected.

3
4 **V. CAPITAL STRUCTURE**

5
6 Q. WHAT CAPITAL STRUCTURE HAVE YOU RECOMMENDED IN THIS
7 CASE?

8 A. I recommend that the overall cost of capital of PEF be computed using the
9 Florida regulatory basis capital structure shown on Exhibit __ (JAR-1), Page 2.
10 This is based on a financial basis capital structure consisting of 41.8% common
11 equity, 0.5% preferred equity, and 57.7% debt, as shown on Schedule JAR 1,
12 Page 1. I arrived at this recommended capital structure based on the actual
13 capital structure being used by Progress Energy on a consolidated basis as of
14 December 31, 2004. I also made the following observations:

15
16 a) *Industry Average Capital Structure.* The average financial basis
17 capital structure of the electric companies selected by Dr. Vander
18 Weide is 44.21% common equity, 1.10% preferred equity, and
19 54.74% debt (See Schedule JAR 3, Page 2)). This slightly lower debt
20 percentage being used on average by the group as compared to the
21 actual capital structure being used by Progress Energy is consistent
22 with the slightly higher average bond rating that has been awarded to
23 the group selected by Dr. Vander Weide.

24
25 b) *Target Capital Structure.* Progress Energy stated in its 2004 Annual
26 Report to Stockholders that its target financial basis capital structure
27 is one that contains 55% total debt (Page 7 of the Progress Energy
28 2004 Annual Report to Stockholders, and response to Citizen's 3rd Set
29 of Interrogatories, Question #112.) as contrasted to 63.08% equity that
30 it has requested in this rate case if the capital structure is computed on
31 the same basis as what Progress Energy used for its target. See
32 Schedule JAR 1, Page 2. This 55% target debt level is a result that is

1 not only close to the actual capital structure it is now using, but is also
2 virtually identical to the average capital structure of the electric utility
3 group selected by Dr. Vander Weide.

4
5 c) *S&P Guidelines for BBB rating.* S&P specifies that its capital
6 structure guidelines (financial basis) for a BBB rated electric company
7 in Progress Energy's risk category of "5" is debt as a percentage of
8 total capital of between 50% and 60% (See page 45 of S&P Corporate
9 Rating Criteria 2005. The mid-point of this range is exactly equal to
10 Progress Energy's target capital structure, but is also virtually
11 identical to the average capital structure being used by the
12 comparative group of electric companies.

13
14 The percentage of common equity in the capital structure of Progress Energy
15 Consolidated is within a reasonable range and therefore could be maintained in
16 the long-run. If the common equity ratio of Progress Energy consolidated were
17 actually increased, rather than merely "imputed" at the level of PEF for
18 ratemaking purposes, within reason such an increase could benefit ratepayers by
19 having a company with lower financial risk.

20
21
22 Q. IS THERE ANY REASON PROGRESS ENERGY FLORIDA REQUIRES
23 THE 36.33% DEBT LEVEL REQUESTED BY THE COMPANY RATHER
24 THAN THE 55-57.6% DEBT LEVELS BEING USED SUCCESSFULLY BY
25 THE COMPARATIVE GROUP OF COMPANIES AND BY THE
26 CONSOLIDATED PROGRESS ENERGY?

27 A. No. To require a debt level of no more than 36.33%, (financial basis as derived
28 on Exhibit ___ (JAR-1), Page 2, or on relative terms about 20% less debt used
29 by either the consolidated Progress Energy or by the comparative group,
30 Progress Energy Florida would have to be in a significantly higher risk category
31 than either the consolidated Progress Energy or the average of the comparative

1 groups. S&P's bond rating write-up shows that, if anything, Progress Energy
2 Florida is in a lower risk category than the consolidated Progress Energy. Even
3 the Company does not claim that Progress Energy Florida is in a higher risk
4 category than the consolidated Progress Energy. See Exhibit ____ (JAR-15), the
5 response to Citizen's 3rd Set of Interrogatories, Question # 126.

6

7 Q. IN HIS DIRECT TESTIMONY, DR. CICCHETTI CLAIMS THAT PEF IS
8 REQUESTING A CAPITAL STRUCTURE CONTAINING 55% EQUITY,
9 WHILE YOU SAY THE COMPANY HAS REQUESTED A CAPITAL
10 STRUCTURE CONTAINING 63.08% COMMON EQUITY. PLEASE
11 EXPLAIN THE DIFFERENCE.

12 A. A. My Schedule JAR 1, Page 2 shows that the capital structure being requested
13 by PEF is really 63.08% common equity if placed on the same financial basis that
14 is used by Progress Energy for setting its capital structure target *and* by rating
15 agencies. As also shown on Exhibit ____ (JAR-1), Page 2, even if the capital
16 structure is put on a Florida regulatory basis, the PEF requested capital structure
17 still contains 57.83% equity, not the 55% cited by Dr. Cicchetti. As stated by Mr.
18 Sullivan on page 10 of his testimony, the 55% common equity ratio is "... before
19 taking long-term purchased power contracts into account."

20

21 Q. DOES THE EXISTENCE OF PURCHASED POWER CONTRACTS
22 INFLUENCE THE COMPARATIVE ANALYSIS?

23 A. First, as explained more fully below, when deciding what capital structure to
24 target for Progress Energy consolidated, the parent did not make an adjustment for
25 the effect of PEF's contracts on Progress Energy's rating. Second, if one wants to
26 compare the capital structure of PEF adjusted for purchased power contracts, any

1 comparisons to other companies should also be done after making purchased power
2 contract adjustments to the other companies.

3

4 Q. DOES PROGRESS ENERGY FLORIDA HAVE A SIGNIFICANTLY
5 HIGHER PERCENTAGE OF PURCHASED POWER CONTRACTS THAN
6 THE PERCENTAGE OF PURCHASED POWER CONTRACTS USED BY
7 COMPANIES IN THE COMPARATIVE GROUP SELECTED BY DR.
8 VANDER WEIDE?

9 A. I do not know. In an attempt to test the validity of the Company's claim
10 regarding the impact of purchased power contracts on the proper capital
11 structure for Progress Energy Florida, the Company was asked to provide the
12 purchased power information relative to companies in his comparable group
13 in a form similar to that presented by Dr. Vander Weide on page 22 of his
14 testimony. The Company has refused to provide the information. See
15 Exhibit ___ (JAR-15), the response to Citizen's 3rd Set of Interrogatories,
16 Question # 141. Suffice it to say that, with respect to the companies in his
17 comparable group, Dr. Van der Weide did not attempt to "follow through"
18 with his proposed adjustment. The absence of this subject as a consideration
19 in Dr. Vander Weide's comparison of PEF and other companies is telling, as
20 it is a measure of the significance—or lack thereof-- he attributes to it.

21

22 Q. EVEN IF IT WERE DETERMINED REASONABLE TO CONSIDER
23 PURCHASED POWER AS A RELEVANT FACTOR, WOULD THAT
24 JUSTIFY A LOWER DEBT LEVEL FOR PROGRESS ENERGY FLORIDA?

25 A. No. The Company has failed to present any such justification. If risk
26 adjustments are made, it is improper to make an adjustment for only one factor

1 without also considering others. S&P notes that, compared to the rest of Progress
2 Energy, Progress Energy Florida has the relative advantage of stability. In
3 contrast, S&P finds that Progress Energy's "...merchant generation operations
4 remain high risk." (See Exhibit __ (JAR-15), OPC 2nd POD #86). Therefore, in
5 aggregate, if anything Progress Energy Florida should be able to carry a
6 percentage of debt higher than that of the consolidated Progress Energy and still
7 be able to maintain a BBB bond rating.

8

9 Q. HOW SHOULD THE COMMISSION DETERMINE THE CAPITAL
10 STRUCTURE TO USE IN THE DETERMINATION OF THE OVERALL
11 COST OF CAPITAL APPLICABLE TO THE REGULATED ELECTRIC
12 OPERATIONS OF PEF?

13 A. Ideally the Commission should use the capital structure that will balance safety
14 and economy. However, the determination of the capital structure that would
15 produce the lowest overall cost of capital is a controversial undertaking.
16 Therefore, commissions frequently look to actual capital structures as indicators
17 of the capital structures that will produce the lowest overall cost of capital.
18 Utility rate regulation is a substitute for competition. Competition puts continual
19 pressure on companies to provide services desired by its customers at the lowest
20 price. To provide services at the lowest price, competitive companies have to
21 minimize all costs, including the cost of capital. The cost of capital can be highly
22 influenced by the capital structure a company uses.

1 **It cannot be stressed strongly enough that the reported capital structure**
2 **of wholly owned subsidiaries such as PEF does not provide insight into what**
3 **capital structure management believes will produce the lowest overall cost of**
4 **capital.** Subsidiary capital structures can, and often do, contain equity that was
5 actually raised by its parent in the form of debt and not equity. Holding
6 companies with regulated subsidiaries have a special incentive to put extra equity
7 on the books of such regulated subsidiaries when the only point to such excess
8 equity is to rationalize a higher than appropriate revenue requirement (and
9 correspondingly large dividends to be paid to the parent).

10 Significantly, Standard & Poors is specifically aware of the problems
11 associated with a high common equity ratio reported on the books of regulated
12 subsidiaries when such extra equity disappears at the consolidated level:

13
14 Utilities are often owned by companies that own other, riskier
15 businesses or that are saddled with an additional layer of debt
16 at the parent level. Corporate rating criteria would rarely view
17 the default risk of an unregulated subsidiary as being
18 substantially different from the credit quality of the
19 consolidated economic entity (which would fully take into
20 account parent-company obligations). Regulated subsidiaries
21 can be treated as exceptions to this rule – if the specific
22 regulators involved are expected to create barriers that insulate
23 a subsidiary from its parent.

24 See page 43 of Corporate Rating Criteria from Standard & Poors, a copy
25 included in Exhibit __ (JAR-14).

26 Based upon the principles in the above statement, in spite of the substantial
27 extra percentage of common equity in the capital structure of PEF compared to
28 the consolidated Progress Energy, over time PEF has still received the same BBB

1 bond rating as the consolidated Progress Energy. Without the benefits of the
2 stronger bond rating to accompany it, the extra equity Progress Energy Florida
3 has arranged to show on its books only serves to make the overall cost of capital
4 appear considerably more expensive than it is. A review of documents from
5 Standard & Poors definitively shows this:

6
7 a) Page 45 of the 2005 edition of "Corporate Rating Criteria" shows
8 that a company such as Progress Energy Florida with a risk rating of "5" (See
9 the response to to interrogatory number 158 from the Citizen's 3rd set of
10 Interrogatories included in Exhibit __ (JAR-14) should have the 50-60% debt
11 in its capital structure that Progress Energy has in order to obtain the BBB
12 bond rating. The 44.35% debt ratio being claimed by Progress Energy
13 Florida for its cost of capital computation is towards the stronger end of the
14 target range of 42-50% debt sufficient for an A rating and is a far stronger
15 capital structure than the 50-60% range Standard & Poors finds consistent for
16 a BBB rating when the risk rating is "5".

17
18 b) The Standard & Poors research report on Progress Energy Florida
19 provided in response to OPC 2nd POD #86 (Exhibit ____ (JAR-14)) states the
20 following:

21
22 The ratings on Florida Power Corp. (d/b/a Progress Energy
23 Florida) reflect the consolidated credit profile of the parent Progress
24 Energy Inc. The 'BBB' corporate credit rating on Progress Energy and
25 its utility subsidiaries reflect weakened utility financial performance
26 stemming from the economic downturn and rate reduction,
27 compounded by overcapacity in the Southeast, which has weakened
28 the financial performance of the unregulated generation portfolio, and
29 high financial leverage. The company's tax-advantaged synthetic fuel
30 business also has the effect of reducing the company's cash flow in the
31 intermediate term.

1 The wholly owned subsidiaries include Carolina Power &
2 Light Co. (CP&L d/b/a Progress Energy Carolinas), Florida Power,
3 and Progress Ventures. The Average business position is supported by
4 the relatively stable regulated utilities, CP&L and Florida Power,
5 which contribute 80% of the consolidated company's net income.
6 Long-term growth prospects remain strong in the vibrant Florida
7 service area while the negative trend in North Carolina's industrial
8 sales is expected to stabilize in the near term, after four years of
9 significant declines. The merchant generation operations remain high
10 risk.

11

12 Based on the above, it can be seen that the bond rating of Progress Energy
13 Florida is constrained, not only by the total amount of debt in the consolidated
14 capital structure, but also by the higher risks associated with the unregulated and
15 non-Florida regulated operations of the consolidated Progress Energy. The above
16 statements also show that the extra common equity Progress Energy now wants
17 to create on the books of PEF for ratemaking purposes should not be expected to
18 help strengthen PEF's bond rating. If the Company wants a higher bond rating
19 for PEF, it would have to lower the debt ratio and increase the common equity
20 ratio of the consolidated Progress Energy. Practically speaking, based on the
21 rating agencies' criteria and practices, only by bringing the common equity ratio
22 of PEF up to that of the consolidated Progress Energy, would a bond upgrade be
23 possible.

24

25 Q. IS THE STANDARD AND POORS REPORT CITED ABOVE CONSISTENT
26 WITH STANDARD & POORS' NORMAL RATING POLICY?

27 A. Yes. The 2005 "Corporate Rating Criteria" book explains S&P's view of
28 "Parent/Subsidiary Links" in a chapter beginning on page 86. (See Exhibit __
29 (JAR-14). This page states the following:

30

1 A weak entity owned by a stronger parent usually—although not always—
2 will enjoy a stronger rating than it would on a stand-alone basis.

3

4 And:

5

6 A strong subsidiary owned by a weak parent generally is generally
7 rated no higher than the parent.

8

9 S&P continues, on the same page, to state that the reason why a strong
10 subsidiary is generally not rated any higher than the parent is because:

11

12 ... in most cases, a ‘strong’ subsidiary is no further from bankruptcy than its
13 parent, and thus cannot have a higher rating.

14

15 The above statements show that even though Progress Energy Florida
16 likely has a lower business risk than the consolidated Progress Energy, it will
17 not get a bond rating higher than the consolidated Progress Energy. This is true
18 irrespective of the non-existent common equity Progress Energy asks the
19 Commission to assume for ratemaking purposes. Progress Energy Florida’s
20 proposed high common equity ratio accomplishes nothing other than to create
21 the appearance of a higher cost of capital for Progress Energy Florida in its
22 rate case than is realistic. The sole effect would be to increase PEF’s revenue
23 requirements above that which would be required to earn PEF’s true cost of
24 capital.

25

26 Q. DOES THE COMPANY CLAIM THAT THE SUBSTANTIAL INCREASE
27 IN THE COMMON EQUITY RATIO OF PROGRESS ENERGY FLORIDA
28 WILL INCREASE PROGRESS ENERGY FLORIDA’S BOND RATING?

1 A. No. See the response to Citizens 3rd Set of Interrogatories, Question # 135
2 (Exhibit ___(JAR-15). Without so much as even a claim by the requesting
3 utility that the measure will have that effect, it is entirely unfair to ask
4 ratepayers to pay millions of dollars more to support a capital structure
5 containing so much more common equity than is actually being employed by
6 Progress Energy consolidated. It appears to me that the Progress Energy
7 Florida capital structure's extra equity serves no benefit other than to cause the
8 computation of the overall cost of capital for regulatory purposes to appear
9 much higher than it really is, or needs to be.

10
11 Q. DOES PROGRESS ENERGY HAVE A TARGET CAPITAL STRUCTURE IT
12 IS TRYING TO ACHIEVE?

13 A. Yes. Page 7 of the 2004 Progress Energy Annual Report to Stockholders that is
14 contained in Section F of the Minimum Filing Requirements states: "In 2004, we
15 improved our balance sheet by reducing our debt-to-capitalization ratio to 57.6
16 percent. We're on track to reach our goal of 55 percent." While I have chosen
17 not to make this target capital structure my primary recommendation (because we
18 cannot be sure the Company will actually implement its target), if the target
19 capital structure were to be used, then my recommended overall cost of capital
20 would increase from 6.37% to 6.45%. However, it is important to remember that
21 the appropriate return on equity varies as a function of the level of debt in the
22 capital structure. If this planned reduction in Progress Energy's level of debt
23 were to be reflected in the choice of capital structure in this case, my
24 corresponding recommendation for the cost of equity would change from 9.10%
25 to 9.00%.

26

1 Q. WHY DID PROGRESS ENERGY (CONSOLIDATED) SELECT A CAPITAL
2 STRUCTURE WITH 55% DEBT AS ITS TARGET?

3 A. According to the Company's response to 112c in the Citizen's Third Set of
4 Interrogatories in this proceeding (Exhibit ____ (JAR-15)), the Company chose
5 the 55% debt target for the capital structure of the consolidated Progress Energy
6 "... based primarily on leverage guidelines and median ranges for BBB rated
7 electric utility holding companies."

8

9 Q. WHEN MAKING ITS DECISION TO TARGET THE 55% DEBT RATIO, DID
10 PROGRESS ENERGY MAKE THE SAME ADJUSTMENT FOR
11 PURCHASED POWER THAT IS PROPOSED BY DR. VANDER WEIDE ON
12 PAGE 22 OF HIS TESTIMONY IN THIS PROCEEDING?

13 A. No . See the response to Citizen's 3rd Set of Interrogatories, #112 b, included in
14 Exhibit ____ (JAR-14). This shows that Dr. Vander Weide's approach and Mr.
15 Portuondo's proposed adjustment to capital structure selection differs from the
16 method used by the management of Progress Energy. Since Progress Energy has
17 not made any special adjustments for purchased power when providing the
18 justification for the capital structure it is actually implementing, it would be
19 inconsistent to treat purchased power any differently in this rate case.

20

21 Q. IS THE CAPITAL STRUCTURE REQUESTED BY THE COMPANY THAT
22 CONTAINS 63.08% COMMON EQUITY AND ONLY 36.33% DEBT A
23 REASONABLE BASIS FOR DETERMINING THE COST OF CAPITAL IN
24 THIS PROCEEDING?

25 A. No. Particularly in light of an actual structure that includes debt above 50% at the
26 consolidated level, it is unreasonable. If used, it would result in the computation
27 of a rate increase when, in reality, the Company should be ordered to lower rates.

1 The requested capital structure is merely the product of internal bookkeeping, and
2 inappropriate, unwarranted adjustments, and not one that is reflective of the true
3 financial risk impacting the bond investors of Progress Energy Florida. To the
4 extent the percentage of common equity in the capital structure of PEF exceeds
5 the Progress Energy consolidated level, such excess has little or no impact on the
6 bond rating of PEF. However, if the level of common equity in the capital
7 structure of PEF should fall below the level of equity in the capital structure of
8 Progress Energy consolidated to an extent not justified by the difference in risk
9 profile, then this could eventually cause PEF to have a bond rating lower than
10 that of Progress Energy.

11 As is shown later in this testimony, Standard & Poors has effectively rated
12 the debt of Progress Energy Florida based on the consolidated Progress Energy
13 capital structure. Because Progress Energy on a consolidated basis carries far
14 less equity than is proposed for Progress Energy Florida, the extra equity being
15 requested for Progress Energy Florida fails to provide the financial strength
16 benefits that would be associated with the proposed increase in the common
17 equity ratio. The use of the Progress Energy Florida capital structure contributes
18 to a substantially exaggerated computation of the overall cost of capital at a great,
19 wasted expense to ratepayers. The use of the Progress Energy Florida capital
20 structure would also be wrong because it would force ratepayers to subsidize the
21 unregulated operations of Progress Energy.

22

23 Q. HOW DO YOU KNOW THAT THE USE OF THE PROGRESS ENERGY
24 FLORIDA BALANCE SHEET WOULD RESULT IN RATEPAYERS
25 SUBSIDIZING THE UNREGULATED OPERATIONS OF PROGRESS
26 ENERGY?

1 A. As shown on Exhibit ____ (JAR- 1), Page 3, if the capital structure of Progress
2 Energy Florida and Progress Energy Carolina are subtracted from the
3 consolidated capital structure, what is left is an entity with over \$7 billion of total
4 capital, only about 31.9% of which is common equity. Since the unregulated
5 operations are the most risky portion of the business of Progress Energy
6 consolidated, it is impossible to believe that the common equity ratios for the
7 regulated operations would be economically chosen to contain so much more
8 common equity than the effective amount left over for regulated operations.
9 Furthermore, the numbers I have presented are actual as of December 31, 2004.
10 In this rate case, the Company has proposed to increase the common equity ratio
11 of Progress Energy Florida over the approximately 48.5% as of December 31,
12 2004 up to 63.08% (See Exhibit ____ (JAR-1), P. 2)). Such an increase in the
13 common equity ratio of Progress Energy Florida is proposed by the Company to
14 occur merely because of an increase in the allocation of total common equity to
15 Florida operations (see the response to Citizen's 3rd Set of Interrogatories,
16 Question # 136 in Exhibit ____ (JAR-15)). If Progress Energy Florida actually
17 does what it has proposed to do, the effect would be for the effective common
18 equity ratio for the unregulated operations of Progress Energy to drop even
19 further.

20

21 Q. HOW DOES USING THE HIGHER COMMON EQUITY RATIO OF
22 PROGRESS ENERGY FLORIDA IMPACT THE INCENTIVE FOR THE
23 COMPANY TO IMPLEMENT A PROPER CAPITAL STRUCTURE?

24 A. If the Commission were to make the mistake of using the capital structure
25 requested by the Company for ratemaking purposes, in addition to overcharging
26 of ratepayers it would provide the Company with an incentive to maintain a

1 consolidated common equity ratio at a lower level than if the Commission were
2 to instead compute the overall cost of capital based on the consolidated capital
3 structure. The more that the level of common equity in the capital structure used
4 to compute the overall cost of capital exceeds the real, consolidated, common
5 equity level, the higher the extent to which the real return on equity earned by
6 Progress Energy on its regulated operations in Florida exceeds the cost of equity
7 allowed by the Commission.

8

9 Q. ON PAGE 33 OF HIS TESTIMONY, DR. CICHETTI SAYS THAT "...AS
10 THE DEBT TO EQUITY RATIO INCREASES, THE ROD [RETURN ON
11 DEBT] WILL BEGIN TO INCREASE AS BOND RATINGS ARE LOWERED,
12 INCREASING OVERALL ROR. SECOND, FINANCIAL RISK OF THE FIRM
13 IS HIGHER AS DEBT-TO-EQUITY RATIO INCREASES." PLEASE
14 RESPOND.

15 A. As they relate to a stand-alone entity, those statements are generally correct.
16 However, whether they are applicable to PEF requires a consideration of PEF's
17 place in the overall corporate structure. What Dr. Cicchetti has failed to
18 recognize is that the trade-off between the cost of debt and capital structure for
19 PEF does not take place at the PEF level, but at the Progress Energy consolidated
20 level. Standard & Poors recognizes that the higher debt ratio carried by the
21 consolidated Progress Energy controls the bond rating of not only Progress
22 Energy, but PEF as well. Therefore, the huge fallacy in what the Company is
23 proposing is that it wants to receive the extra return for an especially thick

1 common equity ratio without any hope of receiving the lower cost of debt that
2 would accrue to such an equity rich capital structure -- because Standard & Poors
3 recognizes that the higher debt ratio carried by the consolidated Progress Energy
4 controls the bond rating of not only Progress Energy, but PEF as well.

5

6 Q. DOES THE COMMISSION'S DECISION TO PROTECT INVESTORS FROM
7 STORM DAMAGE COSTS INFLUENCE THE CHOICE OF CAPITAL
8 STRUCTURE IN THIS PROCEEDING?

9 A. Yes. The process of passing on all storm damage costs to ratepayers means that
10 ratepayers are entitled to benefit from any reduction in the cost of capital that
11 results from this risk reduction treatment. The most direct impact of protecting
12 the company from storm damage expense exposure is in its capital structure.
13 Debt is less expensive than equity, and so should be employed prudently to lower
14 overall revenue requirements. The appropriate level of debt in the capital
15 structure is directly a function of the company's risk profile. The higher the risk,
16 the lower the amount of debt that is appropriate, and vice versa. The elimination
17 of storm damage risk enables the company to prudently use more debt, and
18 thereby lowers the cost of capital. Since this extra debt will show up on the
19 consolidated books of Progress Energy, the treatment methodology for storm
20 damage expense that has been chosen by the Florida Public Service Commission
21 makes it all the more critical that the common equity ratio for PEF be no higher
22 than the consolidated common equity ratio. To the extent that the other regulated
23 operations owned by Progress Energy do not have the same degree of storm

1 damage protection, and the unregulated operations are more risky than the
2 regulated operations, one could argue reasonably to apply a *lower* percentage of
3 common equity to PEF for ratemaking purposes than is used by the consolidated
4 operations. Certainly a decision to shift storm-related risk from the company to
5 ratepayers constitutes yet another reason why the Commission should reject the
6 artificially higher amount of equity being requested by PEF. It would be terribly
7 unfair to ratepayers to make them sustain the full risk of storm damage expenses
8 without also passing on to them the full benefit of the resulting lower cost of
9 capital.

10

11 Q. PLEASE CONTINUE.

12 A. By providing certainty to PEF that they will be able to recover future storm
13 damage costs, the Company can prudently use a higher level of debt than it could
14 without such certainty. However, the Commission should recognize that the
15 increase in the debt amount could readily appear on the consolidated books of
16 Progress Energy and not necessarily PEF. This is especially true if Company
17 management believes that they can carry more debt on the consolidated books
18 without having the true benefit of the cost savings associated with the extra debt
19 reflected in PEF ratemaking treatment. Now that the Commission has decided to
20 fully pass on these storm damage costs, it is all the more essential that the capital
21 structure computation be oriented towards the consolidated Progress Energy
22 capital structure and NOT the PEF reported subsidiary capital structure.

23

1 Q. WOULD THE CAPITAL STRUCTURE YOU HAVE RECOMMENDED PUT
2 PRESSURE ON THE BOND RATING OF PEF?

3 A. No. The capital structure I have recommended is consistent with the capital
4 structure that has produced the current bond ratings, and is very similar to the
5 capital structure Progress Energy proposes to implement based upon what it
6 determined to be the debt level consistent with the mid-point of its desired bond
7 rating target of BBB. Page 21 of the Progress Energy Annual Report to
8 Stockholders says the following:

9 Progress Energy's ratings outlook was changed to "negative" from
10 "stable" in 2004 by both Moody's and Standard & Poor's (S&P). Both
11 these ratings agencies cited the uncertainty around the timing of storm
12 cost recovery, potential delays in the Company's debt-leverage plan,
13 uncertainty about the upcoming rate case in Florida and uncertainty
14 about the IRS audit of the Company's synthetic fuel partnerships in
15 their ratings actions. This change in outlook has not materially affected
16 Progress Energy's access to liquidity or the cost of its short-term
17 borrowings. If Standard & Poor's lowers Progress Energy's senior
18 unsecured rating on ratings category to BB+ from its current rating it
19 would be a noninvestment grade rating. The effect of a noninvestment
20 grade rating would primarily be to increase borrowing costs. The
21 Company's liquidity would essentially remain unchanged as the
22 Company believes it could borrow under its revolving credit facilities
23 instead of issuing commercial paper for its short-term borrowing needs.
24 However, there would be additional funding requirements of
25 approximately \$450 million due to ratings triggers embedded in various
26 contracts.

27
28 Note that the target capital structure targeted by the management of Progress
29 Energy varies from the recommendation for PEF made by Dr. Vander Weide on
30 page 20, where he says that PEF should target an "A" bond rating. While both
31 the management of Progress Energy and I believe that a BBB bond rating target
32 is sufficient, for reasons I will develop in detail below the Florida Public Service

1 Commission is not going to be able to take action that would result in an “A”
2 bond rating from Standard & Poors for PEF unless the management of Progress
3 Energy takes action, on a consolidated basis, to increase the common equity ratio
4 above its current targeted “BBB” rating mid-point.

5 The cost of capital I have recommended for PEF will be sufficient for both
6 PEF and the consolidated Progress Energy to keep the current bond rating so
7 long as the other regulated and unregulated entities owned by Progress Energy
8 also provide returns on capital consistent with the level I have recommended for
9 PEF. (Certainly it is not the function of this Commission to anticipate poor
10 performance by the other entities and require PEF’s customers to carry their
11 load.) My recommended cost of capital would not put pressure on the bond
12 rating of PEF because (1) it is fully adequate for the needs of the utility, and (2)
13 no amount of artificial subsidy from PEF to Progress Energy will substitute for
14 the need for Progress Energy consolidated to address the concerns of the rating
15 agencies directly: the only effect would be to overcharge customers.

16 PEF’s bond rating is highly dependent on the bond rating of the consolidated
17 Progress Energy. Providing artificially higher revenues from PEF simply to
18 support the bond rating of Progress Energy would be both inefficient and unfair.
19 It would be unfair because such an approach places all the burden for parent
20 Progress Energy’s situation onto PEF’s Florida ratepayers, when any needed
21 credit protection or strengthening efforts should be placed on all of the operations
22 of Progress Energy, not just those of PEF. It would be inefficient, because
23 merely raising rates at the PEF level without a corresponding decrease in the
24 percentage of debt in the consolidated Progress Energy capital structure would be

1 less effective than reducing Progress Energy's percentage of debt. This is
2 because reducing the percentage of debt at the parent level would not only
3 improve Progress Energy's standings within the Standard & Poors defined capital
4 structure range by bond rating, but also would improve coverage ratios and cash
5 flow by freeing Progress Energy of the responsibility to make interest payments
6 on a higher than optimal level of debt .

7 With the actual percentage of common equity of parent Progress Energy
8 remaining at or below 42% common equity, no help would be provided by
9 artificially and even *fictitiously* inflating the common equity ratio of PEF to a
10 level over 63% for ratemaking purposes. When considering the bond rating
11 potential of a wholly owned subsidiary such as PEF, it must be recognized that a
12 bond rating is highly influenced by the weakest link in the chain. In this case, the
13 chain to the bond rating is made up of two links: the consolidated Progress
14 Energy and PEF. Just as the strength of a chain is not increased if one link is
15 increased to a 1 inch diameter and then hooked to a link with a 1/8" diameter,
16 adding common equity to PEF without a corresponding strengthening of the
17 capital structure of Progress Energy would not provide the claimed help. It
18 would merely place an extra, unfair burden -- in the form of higher revenue
19 requirements to support the additional equity -- onto Florida ratepayers.
20

21 **VI. COST OF DEBT**

22

23 Q. PLEASE SUMMARIZE YOUR FINDINGS ON THE COST OF DEBT.

24 A. I have adopted the cost of debt proposed by the Company.

25

1 **VI. COST OF COMMON EQUITY**

2 **A. Summary of Conclusions on Cost of Equity.**

3 Q. PLEASE SUMMARIZE HOW YOU OBTAINED YOUR COST OF EQUITY
4 RECOMMENDATION.

5 A. The cost of equity of 9.10% was based upon the results of applying the DCF
6 method to the same groups of electric companies and gas distribution companies
7 selected by Company cost of capital witness Dr. Vander Weide. I also relied
8 upon the results indicated by several implementations of the Risk
9 Premium/CAPM method.

10
11 Q. PLEASE CONTINUE.

12 A. As I explain in detail later in this section, I determined the cost of equity to PEF
13 by applying both a simplified or constant growth DCF method and a complex or
14 multi-stage DCF method to the same groups of electric utilities and gas
15 distribution utilities selected by Dr. Vander Weide, and by also considering the
16 results of risk premium/CAPM analyses. These results are summarized on
17 Exhibit ____ (JAR-2).

18 As shown on this exhibit, application of the simplified, or constant growth
19 DCF method indicates a cost of equity between 8.45% and 8.49%. At the same
20 time, the complex or multi-stage DCF produces a cost of equity between 9.51%
21 and 9.56%. The risk premium/CAPM method is indicating a cost of equity of
22 8.20% based upon a method that considers risks specific to the electric industry, a
23 result that is confirmed by the 9.60% to 10.00% cost of equity indicated by the

1 risk premium/CAPM for a company of average risk. (Electric utilities have
2 below average risk). When interpreting the array of cost of equity results, I am
3 aware that the reason the multi-stage DCF is indicating a higher cost of equity
4 than the simple DCF method is because Value Line is forecasting an increase in
5 the retention rate. This increase in the retention rate comes about because of the
6 relatively low forecast growth rate for dividends, especially for the gas
7 distribution companies. Since the simplified DCF result is the one consistent
8 with the risk premium/CAPM results, it is likely that Value Line's forecasted low
9 dividend growth rate is inconsistent with what the market expects. Nevertheless,
10 I gave weight to the multi-stage DCF in formulating my recommended 9.00%
11 cost of equity for an electric company with financial risk equal to that of the
12 group of electric distribution companies. This makes my 9.00% cost of equity
13 conservatively high.

14 In contrast, Dr. Vander Weide recommended a cost of equity of 12.3% with a
15 capital structure containing 63.08% common equity (financial ratio basis). The
16 Company then increased Dr. Vander Weide's recommended 12.3% up to 12.8%.
17 The combined effect of this high cost of equity and high percentage of common
18 equity in the capital structure is to increase the revenue requirement associated
19 with the Company's cost of capital to amounts substantially higher than the
20 revenue requirement derived from my recommendations. In fact, as explained
21 earlier in this testimony, the Company's request for cost of capital is so excessive
22 that just correcting the cost of capital computation switches the Company's
23 request for a rate increase into the need for a meaningful rate decrease.

1 Q. HOW DOES YOUR IMPLEMENTATION OF THE DCF MODEL VARY
2 FROM THE IMPLEMENTATION USED BY THE COMPANY?

3 A. Unlike Dr. Vander Weide, I quantified growth by using a DCF method that
4 computes constant growth that is sustainable over the long term, and applied the
5 risk premium/CAPM methods without making the mistake of using the known-
6 to-be inflated arithmetic averaging method. In addition, I recognized the data
7 that shows overwhelmingly that risk premiums have been declining for decades.
8 Most of the cost of equity difference is directly attributable to the errors Dr.
9 Vander Weide made in his implementation of the risk premium/CAPM methods.
10 I say this because he obtained a result of 9.4% when applying his version of the
11 DCF method to the comparative electric companies he selected (See Exhibit No.
12 ____ (JVW-1), Page 1)), a value that is much closer to my recommended 9.10%
13 cost of equity than the result he determined after giving significant weight to his
14 risk premium/CAPM results. The differences are explained in detail later in this
15 testimony.

16

17 **B. Overview of Cost of Equity**

18 Q. WHAT IS THE COST OF EQUITY?

19 A. The cost of equity is the rate of return that must be offered to a common equity
20 investor in order for that investor to be willing to buy the common stock. The
21 rate of return is earned in two different ways. One part of the return is from a
22 dividend. The other part of the return is through the change in the stock price.

1 Investors buy stock to benefit from the total return. Total return is the sum of the
2 dividend income and the profit (or loss) obtained from the change in the stock
3 price.

4 While dividends are the norm in the utility industry, many companies do not
5 pay a dividend. For those companies that do not pay a dividend, investors are
6 willing to buy the stock if investors expect that the potential for capital
7 appreciation offsets the lack of any dividend income. Common equity investors
8 can, at best, only estimate what the stock price will be in the future. Also,
9 investors are not certain what future dividends will be. Therefore, common
10 equity investment always entails risk, but the risk can vary greatly from company
11 to company.

12 The return an investor cares about is best measured as the return on market
13 price. An investor who buys a common stock at \$10.00 per share and sells it a
14 year later for \$10.90 will have received a 9% return (plus dividends, if any),
15 irrespective of whether or not the company earned any money, and irrespective of
16 the return on book value. However, utility commissions have the responsibility
17 of balancing the interests of investors and ratepayers. Therefore, if it can be
18 determined that investors are willing to buy stock with the **expectation** of being
19 able to earn an annual return of 9%, then a commission should set rates so that
20 the return on used and useful rate base is at the level where the future return on
21 book value is expected to be 9%. Consequently:

22 a) if the market price should happen to be below book value, this
23 would not be justification for providing a lower return than the cost
24 of equity demanded by investors.

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- b) if the market price should happen to be above book value, this would not be justification for providing a higher return than the cost of equity demanded by investors.

As the U. S. Supreme Court found in its 1948 decision in Federal Power Commission v. Hope Natural Gas, 320 U.S. 591, at page 602, the stock price is "... the end product of the process of rate-making not the starting point..." and that "... the fact that the value is reduced does not mean that the regulation is invalid." Therefore, in rate cases it is important to set rates based on a return on book value. Among the many problems with the market value capital structure approach discussed by Dr. Vander Weide is that it contradicts this important principle from the Hope Natural Gas case.

Q. HOW MANY BASIC METHODS ARE USED TO CALCULATE THE COST OF EQUITY?

A. There are two basic methods commonly used to determine the cost of equity: the Discounted Cash Flow ("DCF") method and the risk premium/Capital Asset Pricing Model ("CAPM") method.

Q. PLEASE EXPLAIN BRIEFLY HOW THE DCF METHOD WORKS?

A. The DCF method starts with the current dividend yield, and adds to that dividend yield an estimate of growth to arrive at the estimated cost of capital. This growth is really the estimate of the future stock price appreciation that investors are predicting might occur until the stock is sold. Dividend growth, book value

1 growth, and earnings growth, to the extent they may be used, are only relevant to
2 the degree they can help estimate the future stock price.

3

4 Q. PLEASE EXPLAIN WHY THE DCF METHOD IS USED.

5 A. Perhaps a major part of the reason that the DCF method has been so commonly
6 used over the years is because, more than any other method, if properly applied, it
7 can directly examine those factors that provide the incentive for investors to buy
8 common stock in the first place.

9 Q. PLEASE EXPLAIN HOW THE RISK PREMIUM/CAPM METHOD WORKS.

10 A. The risk premium method in a generic sense includes the CAPM method, and it
11 is also commonly used by witnesses in rate proceedings. The risk
12 premium/CAPM method is really measuring the very same thing as the DCF
13 method --- the total return expected by a common stock investor. However,
14 rather than determining this total return by directly estimating future dividends
15 and capital appreciation, the risk premium/CAPM method is looking either to
16 interest rates or the inflation rate to help estimate what total return common stock
17 investors require.

18 **C. DCF Method**

19

20 Q. IS THE DCF METHOD WIDELY USED IN UTILITY RATE
21 PROCEEDINGS?

1 A. Yes. The DCF model is more widely used than any other approach to
2 determining the cost of equity.

3

4 Q. IS THERE A CONSISTENT MANNER COMMONLY USED TO
5 IMPLEMENT THE DCF METHOD?

6 A. No. However, most implementations of the DCF model in utility rate
7 proceedings do not start from the basic form of the model that separately
8 discounts each future expected cash flow. Instead, utility rate proceedings
9 typically focus on a special, simplified, version of the DCF model where the
10 cost of equity, k , equals dividend yield (D) plus growth (g) in the formula
11 $k=D/P +g$.

12 Most analysts acknowledge that when using this simplified, constant
13 growth or $D/P + g$ form of the DCF model, the growth rate “ g ” must be
14 representative of the constant future growth rate anticipated by investors for
15 dividends, earnings, book value, and stock price. However, all too often those
16 who implement this constant growth form of the DCF model forget this
17 important principle. Some merely try to make the issue go away by incorrectly
18 stating that the $D/P +g$ formula requires the “assumption” of constant growth.
19 When so stating, they are missing the proper mathematical use of the word
20 “assumption”. Actually, the “assumption” of constant growth is a
21 mathematical step that is made when this simplified $D/P + g$ form of the DCF
22 model is derived from the basic form of the model. However, what this means
23 mathematically is that the $D/P + g$ form should not be used UNLESS the value

1 of “g” is consistent with the mathematical characteristics that had to be met in
2 order to derive this special form of the DCF model in the first place. Failure to
3 recognize that the selected value of “g” must be in keeping with the
4 mathematical derivation of the $D/P + g$ form of the DCF model often causes
5 substantial, unnecessary error when implementing the DCF model in utility rate
6 proceedings. For example, a user of the $D/P + g$ form of the DCF model that
7 relies on only earnings growth, in the face of evidence that dividends or book
8 value is expected to grow at a different rate than earnings, is probably using the
9 DCF model incorrectly.

10

11 Q. WHY IS IT SO IMPORTANT FOR THE GROWTH RATE USED IN THE
12 CONSTANT GROWTH VERSION OF THE DCF MODEL TO BE
13 REPRESENTATIVE OF THE CONSTANT GROWTH RATE FOR
14 DIVIDENDS, EARNINGS, BOOK VALUE AND STOCK PRICE?

15 A. The derivation of the constant growth formula is based upon the principle that
16 investors buy stock solely for the right to future cash flows obtained as a result of
17 that ownership. The cash flows are obtained through dividend payments and/or
18 stock price appreciation. The constant growth version of the DCF formula will
19 accurately quantify investors’ expectations only if investors expect the dividend
20 yield (defined as dividend payment divided by stock price, or D/P in the constant
21 growth DCF formula) and the growth in dividends to best be estimated at one
22 constant growth rate for many years into the future. The dividend yield and
23 growth rate that are used in the constant growth formula cannot be casually taken

1 from any source that happens to publish a growth rate, even if the source is highly
2 reliable. This is because the highly reliable source could very well be publishing
3 a growth rate that is different from the very special kind of growth that is
4 appropriate for the constant-growth DCF formula.

5 Consider what happens if the expected growth rates are not all equal:

6 1. DIFFERENT GROWTH RATE FOR EARNINGS AND FOR DIVIDENDS.

7 Both dividends and the ability for a company to grow dividends in the future
8 are directly derived from earnings. The dividend yield, or D/P , portion of the
9 constant growth DCF formula quantifies the investor-derived value from the
10 portion of earnings paid out as a dividend. The “ g ” portion of the constant
11 growth DCF formula quantifies the value of the portion of earnings retained
12 in the business.

13 If dividends are quantified using the current dividend rate, but an
14 earnings forecast is used to quantify “ g ” that is based upon a future
15 environment in which earnings are expected to grow more rapidly than
16 dividends, an ever-increasing portion of the total return expected by investors
17 will be attributable to growth, and a smaller portion will be attributable to
18 dividends. Under these conditions, other things being equal, the constant
19 growth version of the DCF model would overstate the cost of equity because
20 the decrease in the payout ratio that results from a more rapid earnings growth
21 rate than dividend growth rate would shift a greater portion of the earnings
22 from dividends to earnings growth.

23 The result of is that the higher future earnings growth rate would

1 cause the portion of earnings available for dividends to be lower, and
2 therefore the dividend yield would be lower. Conversely, if future earnings
3 growth were expected to be less than dividend growth, the constant growth
4 form of the DCF model would understate the cost of equity.

5 Every time a dividend payment is scheduled, the board of directors of
6 a company decides what portion of earnings to pay out as a dividend and
7 what portion of earnings to re-invest, or “retain” in the business. It is this re-
8 investment of earnings that causes sustainable growth. Both dividends and
9 growth therefore compete for the same dollars of earnings. The higher the
10 portion of earnings allocated to the payment of dividends, the smaller the
11 amount of earnings left over for re-investment and therefore the lower the
12 future growth rate.

13 The relationship between the portion of earnings paid out as a
14 dividend and the portion re-invested in the business is commonly referred to
15 as either the dividend “payout” ratio (which is computed by dividing
16 dividends by earnings), or the “retention rate” (which is computed by
17 dividing the portion of earnings re-invested in the business by earnings). The
18 sum of the payout ratio and the retention rate is 1.0, because 100% of
19 earnings is either paid out as a dividend or retained in the business.

20 The constant growth version of the DCF formula uses a specific
21 dividend rate to compute the “D/P” term of its formula. This specific
22 dividend rate has a specific earnings “retention rate” associated with it. This
23 specific “retention rate” provides for one and only one percentage of earnings

1 that remains to cause the growth that is quantified in the second term of the
2 equation. This is because the portion of earnings paid out as a dividend and
3 the portion not paid out as a dividend must remain equal to total earnings.

4 If the dividend “payout ratio” or the earnings “retention” ratio are not
5 constant, the portion of earnings available for growth and the portion
6 available for dividends will continue to shift over time. Under such
7 conditions, the constant growth formula produces an erroneous result because
8 it is incapable of properly accounting for this change.

9

10 2. EARNINGS PER SHARE GROWTH RATE DIFFERENT FROM STOCK
11 PRICE GROWTH RATE. When earnings per share growth rates are measured
12 over a relatively short time period, such as the five-year consensus growth rates
13 compiled by financial services such as Zacks and I/B/E/S, it is likely that
14 investors expect materially different growth rates in earnings per share and stock
15 price. This is because the earnings per share growth rate as reported in such
16 services is simply the compound annual growth rate in the earnings per share
17 from the most recently completed fiscal year compared to the earnings per share
18 forecast for five years into the future. Presumably, an earnings per share forecast
19 for five years into the future is sufficiently far off that analysts’ forecasts for that
20 time period must be based upon an expectation of normal conditions. Five years
21 into the future is too far off to forecast abnormal economic conditions, abnormal
22 weather conditions, or any abnormal operating problems that could impact
23 earnings. However, the base year from which earnings are forecast is likely to

1 contain some abnormalities that have an impact on earnings. To the extent this
2 abnormality exists, the forecast of earnings per share growth from the base year
3 to a period five years in the future will be equal to the sustainable growth rate
4 plus or minus the impact of any abnormalities. Growth that is required to bring
5 earnings up to or down to normally expected conditions is not sustainable
6 growth, and therefore it is not the kind of growth that would be mirrored in the
7 stock price growth rate.

8
9 3. DIFFERENT GROWTH RATES FOR EARNINGS AND FOR BOOK VALUE.

10 The return on book equity is computed by dividing earnings by book value. This
11 is an important number for several reasons: a) for a regulated utility company, the
12 allowed cost of equity is the return on book equity that a utility commission
13 intends for a company to earn on the regulated portion of its business, and b)
14 unregulated companies attempt to earn the highest risk adjusted returns on equity
15 that are possible.

16 If earnings per share grow more rapidly than book value per share, the
17 return on equity increases. Conversely, if earnings per share grow more slowly
18 than book value per share, the return on equity decreases. While increases and/or
19 decreases in the earned return on equity can and do occur, it is not credible to
20 forecast a sustained change in the return on equity for the many years into the
21 future that are required in the constant-growth DCF model.

22 For example, a forecasted continuation of a decrease in the earned return on
23 equity would eventually drive the earned return on equity to near zero – a

1 condition that is not credible for a regulated business providing a needed service.
2 Similarly, a forecasted continuation of an increase in the earned return on equity
3 would eventually drive the earned return on equity to an extremely high number –
4 a condition that would not form the basis for a credible growth rate forecast for a
5 regulated business because of the regulatory constraints on the authorized return.

6 Also, an earnings per share growth rate higher than the book value per share
7 growth rate is not credible for a competitive business because, as returns would
8 go higher and higher, more and more competitors would be attracted. If a growth
9 rate based upon an earning per share forecast higher than the forecast book value
10 per share growth rate were used in a constant-growth form of the DCF model,
11 then the constant-growth version of the DCF model would contain an upward
12 bias. Conversely, if an earnings per share forecast is lower than the book value
13 per share growth rate, then the constant-growth form of the DCF model would
14 contain a downward bias.

15

16 Q. ARE FIVE-YEAR EARNINGS PER SHARE FORECASTS OF THE TYPE
17 AVAILABLE FROM SOURCES SUCH AS ZACKS, I/B/E/S, OR VALUE
18 LINE SUITABLE AS A PROXY FOR LONG-TERM SUSTAINABLE
19 GROWTH IN THE CONSTANT-GROWTH FORM OF THE DCF MODEL?

20 A. No. For the reasons I just explained, it is improper to directly use a five-year
21 earnings per share forecast as a proxy for long-term sustainable growth in the
22 constant-growth DCF model. Zacks, I/B/E/S, Value Line and similar firms make
23 no attempt to make earnings per share forecasts to be representative of the

1 anticipated growth rate in dividends per share, book value per share, or stock
2 price. Therefore, while these sources can provide useful in formulating a
3 sustainable growth rate in the context of a constant-growth DCF model, if their
4 estimates are used directly as a proxy for long-term growth, they are no more
5 accurate than it would be to forecast the height of a human at age 60 based upon
6 a reasonable forecast of annual growth for the five years starting at age 12.

7 Earnings per share forecasts are generally different from the anticipated
8 growth in dividends, book value, and stock price because they include the often
9 substantial impact of bringing earnings up or down to a normal earned return on
10 equity from whatever return on equity was achieved in the most recently
11 completed fiscal year. Additionally, such analysts' growth rates tend to be
12 overstated because of the well-documented propensity for analysts to be
13 optimistic (While there are many sources that have shown this optimism to exist,
14 one noteworthy source is a statement by Arthur Levitt, former chairman of the
15 U.S. Securities and Exchange Commission. The following appeared on page 4 of
16 the 5/31/99 issue of Barrons:

17 ARTHUR LEVITT MAY BE THE best chairman of the SEC since
18 Joe Kennedy. And no accident, really: Like Kennedy, Levitt spent
19 enough time in the Street to develop a fine nose for good stocks and
20 bad people.

21 Back in April, Levitt delivered some cogent remarks on
22 analysts (in the sacred order of being, they're somewhat lower than
23 angels) and their innate bullishness (solely the product of their sunny
24 natures).

25 As he observed, sell recommendations make up 1.4% of all
26 analysts' recommendations, while buys represent 68%.

27 By way of explanation for this strange imbalance, he offers the
28 possibility of a "direct correlation between the content of an analyst's

1 recommendation and the amount of business his firm does with the
2 issuer.”

3 Analysts, he grouses are too eager to see every frog of a stock
4 as a prince. What the world needs, he laments, are analysts who call a
5 frog a frog.)

6 The combined effect of the habitual optimism of analysts and the required
7 movement over a relatively short five-year time period to bring earnings per share
8 up to the optimistic levels, commonly causes the five-year growth rates that are
9 estimated by analysts to commonly overstate the future sustainable growth rate.

10

11 Q. HOW IS IT POSSIBLE TO ENSURE THAT THE GROWTH RATE USED IN
12 THE CONSTANT-GROWTH VERSION OF THE DCF MODEL WILL
13 RESULT IN AN APPROPRIATE CONSTANT GROWTH RATE INDICATOR
14 FOR DIVIDENDS, EARNINGS, BOOK VALUE, AND STOCK PRICE?

15 A. The most straight-forward and accurate way to determine the appropriate growth
16 rate is to use the “ $b \times r + sv$ ” formula, where b = the earnings retention rate, r =the
17 future expected return on book equity, and sv is a factor that accounts for
18 sustainable growth caused by the sale of new shares of common stock. The
19 mathematics used to derive the $D/P + g$ form of the DCF model show that the “ b
20 $\times r + sv$ ” formula properly quantifies sustainable growth. However, common
21 mistakes in applying this formula include using historic values of “ r ” rather than
22 future expected values, and failing to use a retention rate value, “ b ” that is
23 consistent with the other values input into the DCF model.

24

1 Q. WHY MUST THE RETENTION RATE, “b” BE CONSISTENT WITH THE
2 OTHER VALUES INPUT INTO THE DCF MODEL?

3 A. By definition, the retention rate, “b”, is the portion of earnings that is NOT paid
4 out as a dividend. Because future earnings will be equal to the return on book
5 equity times book value, the future anticipated value of the return on book equity
6 “r” defines the future expected earnings rate.

7 The portion of earnings NOT paid out as a dividend is directly related to the
8 future expected earnings rate and the future dividend rate. When the dividend
9 rate is input into the $D/P + g$ form of the DCF model, the portion of earnings that
10 has been allocated to dividends has already been defined. Therefore, in order to
11 avoid either the double-counting of earnings or the under-counting of earnings,
12 the same definition of the dividend rate that has been used for the value of “D” in
13 the D/P portion of the DCF equation MUST be used to determine the value of the
14 retention ratio, “b”, when computing sustainable growth.

15

16 Q. HOW CAN YOU ASSURE CONSISTENCY BETWEEN THE DIVIDEND
17 RATE USED TO COMPUTE DIVIDEND YIELD AND THE DIVIDEND
18 RATE USED TO COMPUTE THE RETENTION RATIO?

19 A. The way to ensure the consistency necessary for a valid result from the
20 implementation of the constant-growth form of the DCF model is to compute the
21 retention rate “b” based upon the inputs used for the dividend rate “D” and the
22 future expected return on equity, “r”. As previously stated, by definition, the
23 retention rate “b” is equal to the portion of earnings not paid out as a dividend

1 divided by earnings. The earnings consistent with the value used for “D” is
 2 determined by multiplying book value by the value of the future expected return
 3 on equity, “r”. The book value that should be used is the book value as of the
 4 time of the valuation of “D”. The result is the future expected rate of earnings
 5 that is consistent with the value used for both “D” and for “r”. By subtracting
 6 “D” from the future expected earnings and dividing that amount by the same
 7 future expected earnings results in a retention rate that contains the necessary
 8 consistency. If any other value for “b” is used, such as a forecasted value for “b”
 9 in some future time period, then the result from the constant-growth DCF
 10 computation would be invalid.

11

12 Q. DO STOCK ANALYSTS USE THE "b x r" METHOD?

13 A. Yes. In the textbook, Investments, by Bodie, Kane and Marcus (Irwin, 1989) at
 14 page 478, expected growth rate of dividends is described as follows:

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How do stock analysts derive forecasts of g , the expected growth rate of dividends? Usually, they first assume a constant dividend payout ratio (that is, ratio of dividends to earnings), which implies that dividends will grow at the same rate as earnings. Then they try to relate the expected growth rate of earnings to the expected profitability of the firm's *future* investment opportunities.

The exact relationship is

$$g = b \times \text{ROE}$$

where b is the proportion of the firm's earnings that is reinvested in the business, called the plowback ratio or the earnings retention ratio, and ROE is the rate of return (return on equity) on new investments. If all of the variables are specified correctly, [the] equation . . . is true by definition, . . .

1
2 Q. DO SOME COST OF CAPITAL WITNESSES CRITICIZE THE “b x r”
3 METHOD AS BEING CIRCULAR?

4 A. Yes. Some cost of capital witnesses claim that the “b x r” method is circular
5 because the future earned return on book equity that is used to quantify growth is
6 used to determine the future earned return equity.

7

8 Q. IS THAT CRITICISM VALID?

9 A. No. Those who claim that the method is circular confuse the definition of “r” and
10 the definition of “k”. While “r” is defined as the future return on **book** equity
11 anticipated by investors, “k” is the cost of equity, or the return investors expect
12 on the **market price** investment. Since the market price is determined based
13 upon what investors are willing to pay for a stock, and the book value is based
14 upon the net stockholders’ investment in the company, “r” usually has a different
15 value than “k”. In fact, the proper application of the DCF method relates a
16 specific stock market price to a specific expectation of future cash flows that is
17 created by future earned return (“r”) levels.

18 For example, assume investors are willing to pay \$10 a share for a company
19 when the expectations are that the company will be able to earn 12% on its book
20 equity in the future. If events would cause investors to re-evaluate the 12%
21 return expectation, the stock price should be expected to change. If investors’
22 expectations of the future return on book equity change from 12% to 10%, and
23 there is no corresponding change in the cost of equity, the stock price would

1 decline. The cost of equity, however, would not decline simply because an event
2 might occur that would cause investors to lower their estimate for "r". The cost
3 of equity is equal to the sum of both the dividend yield and growth. Investors'
4 estimate of "r" influences the investors' estimate for growth. Changes in growth
5 expectations cause investors to change the price they are willing to pay for stock.
6 A change in the stock price can cause a change in the dividend yield that offsets
7 the change in expected growth. In this way, a higher dividend yield would offset
8 by the lower expected growth rate and leave the cost of equity, "k", unchanged.

9

10 Q. HOW DID YOU IMPLEMENT THE DCF METHOD IN THIS CASE?

11 A. Consistent with the principles described above, I started by quantifying the D/P,
12 or dividend yield term. Then I computed the growth rate, "g". I derived the
13 growth rates from the internal, or retention growth rate, or " $b \times r$ " + "sv" method
14 where "b" represents the future expected retention rate and "r" represents the
15 future expected earned return on book equity. The "sv" term quantifies the
16 growth that is caused by the sale of new common stock in excess of book value.

17

18

19 Q. HOW DID YOU DETERMINE THE DIVIDEND YIELD OR THE "D/P"
20 PORTION OF THE CONSTANT-GROWTH DCF EQUATION?

21 A. I determined the dividend yield as follows:

22 a) I took the current quarterly dividend rate for each company
23 examined and multiplied it by 4 to arrive at the current annual dividend rate.

1 b) The current quarterly dividend rate was then converted to a
2 dividend yield by dividing it by the stock price of each company. The stock
3 price used was determined two different ways. One way was to take the
4 actual stock price as of the end of the period I examined. The second way
5 was to take the average of the high and low stock price over the prior year.

6 c) The resulting dividend yield was increased by adding one-half the
7 future expected growth rate. This upward adjustment to the dividend yield is
8 necessary because the DCF formula specifies that the dividend yield to be
9 used is equal to the dividends expected to be paid over the next year divided
10 by the market price. After this adjustment to increase the dividend yield, the
11 yield is equal to an estimate of dividends over the next year. To each
12 dividend yield result, I added one-half the future expected growth rate. After
13 the adjustment, the yield is equal to an estimate of dividends over the next
14 year. (The complex version does not directly use dividend yields. Instead, it
15 determines the present value of each dividend payment as a discounted cash
16 flow.)

17
18 Q. HOW DID YOU OBTAIN THE GROWTH RATES YOU USED IN THE DCF
19 METHOD?

20 A. I quantified growth by using “ $b \times r$ ” + sv.

21
22
23 a) determination of value for “r”

1
2 Q. HOW DID YOU DETERMINE THE VALUE OF "r" THAT YOU USED IN
3 THE "b x r" PORTION OF THE GROWTH RATE DETERMINATION?

4 A. My estimate for "r" is based upon a review of the actual historic actual return on
5 book equity and future expected returns on book equity for each company. I used
6 Value Line and the future expected return on book equity that was derived from
7 other analysts' earnings forecasts. The results of these inputs are summarized in
8 Footnote (A) on Schedule 5 Pages 1 and 2. I also considered what are likely to
9 be future allowed returns on equity. Based upon this input, I concluded that
10 investors expect the future sustainable return on book equity, "r" to be 11.00%
11 for the electric company group, and 12.00% for the gas distribution group.

12

13 b) Determination of Retention Rate, "b"

14

15 Q. HOW DID YOU DETERMINED THE VALUE OF THE FUTURE EXPECTED
16 RETENTION RATE "b" THAT YOU USED IN YOUR SIMPLIFIED DCF
17 ANALYSIS?

18 A. As previously explained, I recognized that the retention rate, "b", is merely the
19 residual of the dividend rate, "D", and the future expected return on book equity,
20 "r." Since, by definition, "b" is the fraction of earnings not paid out as a dividend,
21 the only correct value to use for "b" is the one that is consistent with the
22 quantification of the other variables when implementing the DCF method. The
23 formula to determine "b" is:

1

2

$b = 1 - (D/E)$, where

3

b = retention rate

4

D = Dividend rate

5

E = Earnings rate

6

7

However, "E" is equal to "r" times the book value per share. Book value per share is a known amount, as is "E", consistent with the future expected value for "r", and the "D" used to compute dividend yield. Therefore, to maximize the accuracy of the DCF method, quantification of the value of "b" should be done in a manner that recognizes the interdependency between the value of "b" and the values for "r" and "D". I directly computed the value of "b" based upon the values of "D", and "r".

14

15 Q. WHAT RETENTION RATES DID YOU USE IN THE SINGLE-STAGE DCF
16 METHOD?

17 A. Based upon the above formula ($b=1-D/E$), I computed a retention rate of, 33.57%
18 to 36.07% for the electric company group, and 31.74% to 32.55% for the gas
19 distribution group.

20

21 Q. PLEASE SUMMARIZE YOUR DCF RESULTS.

1 A. As I stated earlier in my testimony, I reviewed the results of my analyses as
2 summarized on Exhibit _ (JAR-2). As shown on this schedule, the DCF-derived
3 cost of equity varied between 8.25% and 9.85%, depending upon which group of
4 companies or which time period is being used.

5
6 **D. Risk Premium/CAPM Method**

7
8 Q. PLEASE EXPLAIN THE RISK PREMIUM/CAPM METHOD.

9 A. The risk premium/CAPM method estimates the cost of equity by analyzing the
10 historic difference between the cost of equity and a related factor such as the rate
11 of inflation or the cost of debt.

12 One critically important fact to understand when implementing the risk
13 premium method is that risk premiums have declined in recent years. Federal
14 Reserve Chairman Alan Greenspan made a speech on October 14, 1999 entitled
15 "Measuring Financial Risk in the Twenty-first Century". The text of the speech
16 is available at
17 <http://www.bog.frb.fed.us/boarddocs/speeches/1999/19991014.htm>. In the
18 speech, Chairman Greenspan says:

19
20 That equity risk premiums have generally declined during the
21 past decade is not in dispute. What is at issue is how much of
22 the decline reflects new, irreversible technologies, and what
23 part is a consequence of a prolonged business expansion
24 without a significant period of adjustment. The business
25 expansion is, of course, reversible, whereas technological
26 advancements presumably are not.

1

2 Q. IS CHAIRMAN GREENSPAN'S VIEW OF THE REDUCTION IN RISK
3 PREMIUMS CONSISTENT WITH WHAT INVESTORS NOW
4 GENERALLY EXPECT?

5 A. Yes. One good source to confirm that the financial community shares
6 Chairman Greenspan's conclusion is an article that appeared in the April 5,
7 1999 issue of *Business Week*:

8

9 The risk premium is the difference between the risk-free
10 interest rate, usually the return on U.S. Treasury bills, and the
11 return on a diversified stock portfolio. Over more than 70
12 years, the return to stocks averaged 11.2%, and T-bills, just
13 3.8%. The difference between the two returns, 7.4%, is the risk
14 premium. Economists explain this extra return as an investors'
15 reward for taking on the greater risk of owning stocks. **Most**
16 **market watchers believe that in recent years, the premium**
17 **has fallen to somewhere between 3% and 4% because of**
18 **lower inflation and a long business upswing that makes**
19 **corporate earnings less variable.**

20 [emphasis added]

21

22 On October 4, 2001, a report from Credit Suisse First Boston concluded that
23 the equity risk premium over treasury bonds is 3.7%, and the equity risk premium
24 over Baa rated corporate bonds is now 1.9%. (1 Weekly Insights, "Global Strategy
25 Perspectives", October 4, 2001, Credit Suisse First Boston, pages 55 and 61.

26 Page 189 of the "Stocks, Bonds, Bills, and Inflation 2004 Yearbook" by
27 Ibbotson Associates states, in a section entitled "Long-term Market Predictions" that:

28

29 Ibbotson and Chen believe that stocks will continue to provide
30 significant returns of the long run, averaging around 9.22
31 percent per year, assuming historical inflation rates. The
32 geometric equity risk premium, based on the supply side
33 earnings model, is calculated to be 3.84%.

33

1 The 3.84% forward-looking risk premium concluded by Ibbotson and Chen
2 appears in the very same book that shows a geometric risk premium of 5.0% (Page
3 33 of Stocks, Bonds, Bills and Inflation, 2004 Yearbook, 10.4% geometric mean
4 return on Large Company Stocks minus 5.4% geometric mean returns on Long-term
5 Government Bonds) based upon purely historical data that has not yet factored any
6 consideration of the downtrend in risk premiums.

7 A review of the discussion on page 108 of the same 2004 edition of Stocks,
8 Bonds, Bills, and Inflation shows why the equity-to-debt risk premium has been
9 declining. The description of the data and the data both show that between 1925 and
10 2003, the volatility of common stocks has been declining and the volatility of long-
11 term government bonds has been increasing.

12 Risk is proportional to expected volatility. Therefore, the convergence in the
13 volatility of common stock prices and government bond prices brings the relative risk
14 closer together now than it was back in the earlier part of the Ibbotson Associates
15 1926-2003 data series.

16

17 **1. Inflation Risk Premium Method.**

18

19 Q. HOW HAVE YOU APPLIED THE INFLATION RISK PREMIUM METHOD?

20 A. I implemented the inflation premium method by adding investors' current
21 expectation for inflation to the long-term rate earned by common stocks net of
22 inflation.

23

24 Q. WHAT IS THE BASIS FOR THE INFLATION PREMIUM METHOD?

1 A. The basis has been explained in a book entitled *Stocks for the Long Run*
2 (McGraw Hill 2002) Dr. Jeremy Siegel, a professor at the Wharton School.
3 Professor Siegel examined the real returns achieved by common stocks from
4 1802 through 2001. He concluded that equity returns in excess of the inflation
5 rate have been very similar in all major sub-periods between 1802 and 2001,
6 while the risk premium in between bonds and common stocks has been erratic.

7 At page 11 he states:

8 Despite extraordinary changes in the economic, social, and
9 political environment over the past two centuries, stocks
10 have yielded between 6.6 and 7.2 percent per year after
11 inflation in all major subperiods.

12 At page 12 he states:

13
14 Note the extraordinary stability of the real return on stocks
15 over all major subperiods: 7.0 percent per year from 1802-
16 1870, 6.6 percent from 1871 through 1925, and 6.9 percent
17 per year since 1926. Ever since World War II, during
18 which all the inflation in the U.S. has experienced over the
19 past two hundred years has occurred, the average real rate
20 of return on stocks has been 7.1 percent per year. This is
21 virtually identical to the previous 125 years, which saw no
22 overall inflation. This remarkable stability of long-term
23 real returns is a characteristic of *mean reversion*, a property
24 of a variable to offset its short-term fluctuations so as to
25 produce far more stable long-term returns.

26 Continuing on page 14, he states:

27
28 As stable as the long-term real returns have been for
29 equities, the same cannot be said of fixed-income assets.
30 Table 1-2 reports the nominal and real returns on both
31 short-term and long-term bonds over the same time periods
32 as in Table 1-1. The real returns on bills has dropped
33 precipitously from 5.1 percent in the early part of the
34 nineteenth century to a bare 0.7 percent since 1926, a return
35 only slightly above inflation. The real return on long-term
36 bonds has shown a similar pattern. Bond returns fell from

1 a generous 4.8 percent in the first sub period to 3.7 percent
2 in the second, and then to only 2.2 percent in the third.

3
4 And, at pages 15-16 he explains some of the reasons why bond returns

5 have been especially unstable:

6 Although the returns on equities have fully
7 compensated stock investors for the increased inflation
8 since World War II, the returns on fixed-income securities
9 have not. The change in the monetary policy standard from
10 gold to paper had its greatest effect on the returns of fixed-
11 income assets. It is clear that the buyers of long-term
12 bonds in the 1940s, 1950s, and early 1960s did not
13 recognize the inflationary consequences of the change in
14 monetary regime. How else can you explain why investors
15 voluntarily purchased 30-year bonds with 3 and 4 percent
16 coupons, ignoring a government policy that was
17 determined to avoid devaluation and in fact favored
18 inflation?

19 ...

20 Another explanation for the fall in bond returns is
21 investors' reaction to the financial turmoil of the Great
22 Depression. The stock collapse of the early 1930's caused
23 a whole generation of investors to shun equities and invest
24 in government bonds and newly-insured bank deposits,
25 driving their return downward. Finally, many investors
26 bought bonds because of the widespread (but incorrect)
27 prediction that another depression would follow the war.

28
29
30 Professor Siegel then provides a conclusion on page 16 that:

31
32 Whatever the reason for the decline in the return on
33 fixed-income assets over the past century, it is almost
34 certain that the real returns on bonds will be higher in the
35 future than they have been over the last 70 years. As a
36 result of the inflation shock of the 1970's, bondholders
37 have incorporated a significant inflation premium in the
38 coupon on long-term bonds.

39
40 Q. IS IT POSSIBLE TO ACCURATELY QUANTIFY INVESTORS' CURRENT
41 EXPECTATIONS FOR INFLATION?

1 A. Yes. It has recently become possible to analytically determine investor's
2 expectations for inflation. The U.S. government has issued inflation-indexed
3 treasury bonds. The total return received by investors in these bonds is a fixed
4 interest rate plus an increment to the principal based upon the actual rate of
5 inflation that occurs over the life of the bond. These bonds pay a lower interest
6 rate simply because investors know that in addition to the interest payments, they
7 will receive the allowance for inflation as part of the increment to the principal.
8 This is in contrast to conventional U.S. treasury bonds. The principal amount of
9 a conventional bond does not change over the life of the bond. Therefore,
10 whatever allowance for inflation investors believe they need can only be obtained
11 through the interest payment. By comparing the interest rate on conventional
12 U.S. treasury bonds with the interest rate on inflation-indexed U.S. treasury
13 bonds, the future inflation rate anticipated by investors can be quantified.

14

15 Q. WHAT IS THE CURRENT INFLATION EXPECTATION OF INVESTORS?

16 A. As of May, 2005, the inflation expectation of investors was estimated to be
17 about 3.0%. See Schedule JAR-9. This was obtained by observing that long-
18 term inflation-indexed treasury securities were yielding 1.81%, while long-
19 term non inflation-indexed treasury securities were yielding 4.55%. The
20 difference between 4.55% and 1.18% is 2.74%.

21 Adding the current 3.0% inflation expectation to the 6.6% to 7.0% range
22 produces an inflation risk premium indicated cost of equity of 9.60% to 10.00%
23 for an equity investment of average risk. Since the risk of Progress Energy and
24 the group of comparative electric utilities is below average, this result is
25 consistent with my recommended cost of equity of 9.10%.

26

27 **2. Debt Risk Premium Method**

1
2 Q. HOW DID YOU DETERMINE THE COST OF EQUITY USING THE DEBT
3 RISK PREMIUM METHOD?

4 A. As shown on Schedule 10, pages 1 and 2, I separately determined the proper risk
5 premium applicable to long-term treasury bonds, long-term corporate bonds,
6 intermediate-term treasury bonds and short-term treasury bills. Using a wide
7 array of data points across the yield curve provides the results that are less
8 impacted by a temporary imbalance that may exist in the debt maturity "yield
9 curve".

10

11 Q. EARLIER IN THIS SECTION OF YOUR TESTIMONY, YOU SHOWED
12 THAT FEDERAL RESERVE CHAIRMAN GREENSPAN NOTED THAT THE
13 DECLINE IN EQUITY RISK PREMIUMS "... IS NOT IN DISPUTE." YOU
14 ALSO PROVIDED SOURCES FROM FINANCIAL LITERATURE
15 CONCLUDING THAT THE RISK PREMIUM IS NOW LESS THAN 4%. DO
16 YOU HAVE ANALYTICAL SUPPORT TO SHOW THAT THE
17 STATEMENTS FROM THE SOURCES YOU HAVE QUOTED ARE
18 CORRECT?

19 A. Yes. I examined the historic actual earned returns on common stocks and bonds
20 from 1926 through 2004. But, rather than merely making one simplistic
21 computation that examined the entire time period with only one return number
22 over the entire period, I examined a 30-year moving average of the earned
23 returns. 30 years is long enough to see if indeed there is a trend to the earned

1 returns, but not so short as to be overly influenced by the natural volatility in
2 earned returns that generally occurs over just a year or a few years. As shown in
3 attached graphs, Exhibit __ (JAR-), the decline in the risk premiums is
4 persistent and undeniable.

5 These graphs confirm that a risk premium over 30 year treasuries in the 3 to 4%
6 range is appropriate. For my equity cost computations, I used the conservatively
7 high estimate of 4.0% as the risk premium appropriate to add to U.S. treasuries
8 when determining the cost of equity for an industrial company of average risk.
9 For applying the appropriate risk premium to interest rates other than U.S.
10 treasuries, I determined the average historic risk spread between long-term
11 treasuries and the other interest rate categories I examined. See Exhibit __ (JAR-
12 10), Page 2. This 4% risk premium was increased or decreased as warranted by the
13 historic data when applied to each of the separate interest rate categories to which
14 I applied the risk premium method.

15

16 Q. WHY HAVE YOU CHOSEN 30 YEARS TO SHOW THE DOWNTREND IN
17 THE RISK PREMIUM RATHER THAN A SHORTER TIME PERIOD SUCH
18 AS 10 YEARS?

19 A. Ten years is far too short a time period to be able to observe the actual risk
20 premium based upon realized historic returns. If the equity risk premium
21 declines, this means by definition that equity investors are willing to settle for a
22 lower risk premium component of the total return they are demanding. If they are
23 willing to settle for a lower return and if other things remain equal, this means

1 that investors are willing to pay a higher stock price for the same future expected
2 cash flow. What this means is that the initial reaction to a lowering of the equity
3 risk premium is for the stock price to rise. A rise in the stock price results in a
4 higher historic earned return at the same time the higher stock price means the
5 investor would expect a lower future return. Unless enough years are used in the
6 historic analysis to diminish the misleading impact of the initial response to a
7 reduction in the risk premium, the historic earned returns will not be helpful. I am
8 especially encouraged by the relative consistency of the trend in the lowering of
9 the risk premium as shown in the 30-year data. This reinforces the likelihood
10 that the risk premium has in fact declined as Federal Reserve Chairman
11 Greenspan and many others have observed.

12

13 Q. ARE THERE REASONS WHY THE RISK PREMIUM HAS BEEN IN A
14 MULTI-DECADE DECLINE?

15 A. Yes. In addition to the reasons previously cited as given by Professor Siegel and
16 Ibbotson and Chen, another important reason is a lowering of the U.S. capital
17 gains income tax rate. Investors are concerned about the total after-tax return
18 earned. The majority of the return earned by an investor on a long-term bond
19 (and in many cases all of the return earned by a long-term bond investor) is the
20 interest income. Interest income is fully taxed at regular income tax rates. This
21 is in contrast to an investor in common stocks. Investors in the average large
22 common stock have received the majority of their total return in the form of stock
23 price, or capital appreciation. Capital appreciation is not taxed at all until the

1 stock is sold. Then, it is taxed at the long-term capital gains rate if the stock has
2 been owned long enough to be eligible for such treatment. Currently, long-term
3 capital gains are subject to a federal income tax of no more than 20%. There is a
4 considerably lower rate on long-term capital gains than prevailed in prior
5 decades.

6 Yet another factor causing the decline in the equity-to-debt risk premium is
7 the proliferation of mutual funds. Mutual funds have increased the demand for
8 common stocks by making it easier for more investors to own common stock.
9 While it is debatable whether the popularity of mutual funds is proof that the risk
10 premium has declined (because more investors are comfortable investing in
11 common stock) or is the reason that the risk premium declined (because mutual
12 fund marketing has increased the availability of investment funds for equity), it is
13 nevertheless a relevant factor.

14

15 Q. WHAT MATHEMATICAL METHOD DID YOU USE TO COMPUTE

16 HISTORIC ACTUAL RETURNS WHEN DERIVING THE RISK PREMIUM?

17 A. I used the geometric average. The use of the geometric average approach is
18 supported by the financial literature and empirical analysis. Please see (JAR-13)
19 to this testimony for a detailed discussion on why the geometric average is proper.

20

21 Q. WHAT COST OF EQUITY IS INDICATED BY THE IMPLEMENTATION OF

22 THE RISK PREMIUM/CAPM METHOD IN THIS CASE?

1 A. As shown on Exhibit ___(JAR-2), the cost of equity indicated by the equity risk
2 premium/CAPM method is 7.80% after making specific adjustment for the risk
3 of the electric utility business and is 8.56% before making the risk adjustment.
4 The cost of equity indicated by the inflation premium method is 9.60% to 10.00%
5 before making an adjustment for the lower than average risk faced by PEF.

6

7 **VIII. EVALUATION OF THE TESTIMONY OF DR. VANDER WEIDE**

8 **A. INTRODUCTION**

9

10 Q. PLEASE SUMMARIZE YOUR CONCERNS WITH DR. VANDER WEIDE'S
11 TESTIMONY IN THIS PROCEEDING.

12 A. My review of the testimony of Dr. Vander Weide reveals serious errors in
13 financial logic and poor mathematical choices that have resulted in a substantial
14 upward tilt to his results. These deficiencies, especially when coupled with the
15 incorrect, overly equity-laden common equity ratio proposed by PEF, and further
16 increased by the Company's additional 0.5% requested addition to the cost of
17 equity, cause Dr. Vander Weide's 12.3% calculated cost of equity to be
18 dramatically and unjustifiably higher than PEF's true cost of capital.

19 Problems with the Company's cost of capital presentation include:

20

21 1. Use of the capital structure of PEF, even though this capital structure contains
22 considerably more common equity than the capital structure Progress Energy
23 uses for its consolidated operations.
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2. The PEF capital structure employed by Dr. Vander Weide contains considerably more common equity than the average capital structure of his comparative electric companies. Dr. Vander Weide proposes a backwards adjustment where he adds 0.90% to his recommended cost of equity for PEF based on his claim of financial risk, even though his proposed capital structure has less, not more, common equity than the structures of the companies in his comparative group.
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3. Use of the upwardly-biased arithmetic average to quantify historic actual risk premiums instead of the more appropriate geometric average, coupled with reliance on a specialized estimate of future interest rates rather than the market consensus of future interest rates. After obtaining these high estimates in his risk premium approach, Dr. Van der Weide used them to dilute the more reasonable 9.4% result (per Exhibit No. __ (JVW-1) Page 1 of 3) he obtained when applying his DCF method to the comparative electric companies he chose.
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4. The addition of 0.25% to the cost of equity for financing costs even though the actual costs incurred are substantially lower. (See response to Citizens' 3rd Set of Interrogatories, Question #154 a included in Exhibit __ (JAR -15)
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5. The use of a market value capital structure, even though:
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- a) such a market-based capital structure (where for capital structure purposes the market price times the number of shares outstanding is used for the common equity balance rather than the traditional per-books balance of common equity as is always used by the Commission in electric utility rate proceedings) is not indicative of the way an efficient provider of electric utility service would finance its business, and
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- b) The use of a market-based capital structure is fundamentally, methodologically incompatible with a DCF-derived cost of equity. The mismatch contributes to the overstatement of PEF's cost of equity.
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6. The misuse of the DCF method as Dr. Vander Weide applied it. He erred by:
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- a) incorrectly using a 5-year short-term earnings per share growth as a proxy for long-term growth;
- b) inflating the dividend yield by making an upward adjustment for the quarterly payment of dividends without excluding many

1 companies from the S&P 500 group yet while claiming to have
2 presented data for the group as a whole;

3
4 c) making a corresponding adjustment to lower the return for the
5 compounding of the equity return within a year; and

6
7 d) adding a 25 basis point allowance for financing costs when the
8 actual costs have been considerably lower than this.

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10 7. Selectively excluding companies from the S&P 500 in a way that
11 could bias the result.

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13 8. Misusing the risk premium method by:

14
15 a) Relying on an arithmetic average instead of the
16 methodologically correct geometric average to quantify
17 historic earned risk premiums,

18 b) Using a specialized estimate of future interest rates rather
19 than the market consensus of interest rates, and

20 c) Failing to consider that debt to equity risk premiums have
21 been in a multi-decade decline.

22
23 9. Making an improper adjustment for financial risk.

24

25 **B. MISUSE OF DCF METHOD**

26

27 Q. HOW DID DR. VANDER WEIDE ERR WHEN HE EXCLUDED COMPANIES

28 FROM HIS DCF ANALYSIS?

29 A. At page 35, lines 11-16 of his testimony Dr. Vander Weide states that he

30 excluded companies for various reasons, including any decline in the dividend

31 rate over the last two years. Excluding companies that happened to cut the

32 dividend rate can skew the results of the analysis. This is effectively a technique

33 to exclude companies with unusually low indicated DCF results without making

34 a similar exclusion of companies with high DCF results.

1 Dr. Vander Weide's method for excluding companies from the S&P 500 is
2 even more of a problem than the method he used to exclude companies from his
3 electric utility group. His Exhibit No. ___(JVW-9) specifically states that he
4 excluded all companies that did not have a forecast of a positive growth rate. He
5 made this exclusion, then excluded all companies that had either the 25% highest
6 or 25% lowest results. By first excluding the companies with negative growth
7 rates and then excluding both the high and the low 25%, Dr. Vander Weide has
8 produced what could be a substantial upward skewing of his DCF analysis
9 because he excluded more companies with a low DCF result than those he
10 excluded for a high DCF result.

11 **C. INCORRECT USE OF FIVE-YEAR GROWTH RATES IN DCF**
12 **METHOD.**
13

14 Q. WHAT DID DR. VANDER WEIDE USE TO MEASURE LONG-TERM
15 SUSTAINABLE EARNINGS PER SHARE GROWTH?

16 A. Dr. Vander Weide used analysts' five-year earnings per share forecasts as his
17 sole proxy for long-term sustainable growth.

18

19 Q. IS IT APPROPRIATE TO USE ANALYSTS' FIVE YEAR FORECASTS OF
20 EARNINGS PER SHARE AS THE PROXY FOR LONG TERM GROWTH?

21 A. No. Use of a short-term five-year forecast earnings per share growth rate is
22 improper, because no attempt is made to assure these earnings per share forecasts
23 are representative of the long-term sustainable future growth rates in dividends

1 per share, book value per share, or stock price. While analysts' short-term
2 earnings per share forecasts can be used to develop a sustainable growth rate in
3 the context of a constant-growth DCF model, when they are used directly as a
4 proxy for long-term growth they are no more accurate than a forecast the height
5 of a human at age 60 based upon a reasonable forecast of annual growth for the
6 five years starting at age 12.

7 Earnings per share forecasts are generally different from the anticipated
8 growth in dividends, book value, and stock price because they include the often
9 substantial impact of bringing earnings up or down to a normal earned return on
10 equity from whatever return on equity was achieved in the most recently
11 completed fiscal year. Additionally, as I explained earlier, such analysts' growth
12 rates tend to be overstated because of the well-documented propensity for
13 analysts to be overly optimistic. The combined effect of the habitual optimism
14 and the required movement over a relatively short five-year time period to bring
15 earnings per share up to the optimistic levels causes five-year analysts' growth
16 rates to commonly overstate the future sustainable growth rate.

17
18 Q. HAS DR. VANDER WEIDE PROVIDED ANY JUSTIFICATION FOR HIS
19 USE OF FIVE-YEAR ANALYSTS' EARNINGS PER SHARE GROWTH
20 RATE FORECASTS IN HIS DCF MODEL?

21 A. Yes. On page 31 of his testimony, Dr. Vander Weide claims to rely on a research
22 paper he wrote in 1988. However, Dr. Vander Weide is using his own research
23 paper far more broadly than is justified by the paper itself. The paper concludes

1 that "... investors rely more heavily on analysts' growth forecasts than on
2 historical growth extrapolations in making security buy and sell decisions."
3 Then, the paper goes on to conclude that "Indirectly, this finding lends support to
4 the use of valuation models whose input includes expected growth rates." This
5 says nothing about whether analysts' forecasted dividend growth rates are or are
6 not more accurate than analysts' earnings per share forecasts. It says nothing
7 about whether or not a growth rate derived by multiplying forecasted earned
8 return on equity by a retention rate is more accurate than merely using a five-year
9 earnings per share growth rate as a proxy for long term growth.

10 Furthermore, the paper relied upon by Dr. Vander Weide says nothing about
11 the degree of accuracy that can be obtained from the method he used. All the
12 paper does is compare the relative ability of analysts' forecasted earnings per
13 share growth rates and historic growth rates to explain stock prices. The paper
14 shows that companies with high growth expectations have better stock prices
15 than companies with low growth expectations. However, given how the study
16 was done, if all of the growth rate numbers he used were consistently overstated
17 by 50% due to a factor such as temporarily high growth coming out of a
18 recession, he would have obtained the same results as if the growth rates were
19 accurate. In other words, just because analysts' forecasts are better at explaining
20 stock prices than historical growth rates does not mean that the results are
21 accurate, or free of bias.

22 I have been testifying on the cost of capital since about 10 years before this
23 paper relied upon by Dr. Vander Weide was presented, and I have always

1 advocated using a growth rate based upon forecasted expectations and not
2 historic growth rate indicators. Therefore, I basically agree with the conclusions
3 in the paper that forecasted results are better at explaining stock prices than
4 historic growth rate indicators. However, merely using analysts' five-year
5 earnings per share growth rates as a proxy for what investors expect for long-term
6 sustainable growth is at best a very unreliable and very inaccurate method of
7 quantifying future expected growth. While this has always been true, it is more
8 true now than ever.

9

10 Q. WHY IS IT MORE INAPPROPRIATE NOW THAN EVER BEFORE TO USE
11 ANALYSTS' FIVE-YEAR EARNINGS PER SHARE GROWTH RATE
12 FORECASTS AS A PROXY FOR LONG-TERM SUSTAINBLE GROWTH IN
13 THE DCF MODEL?

14 A. In recent years, investors have learned the hard way that analysts' forecasts often
15 contain a substantial upward bias. Starting at least 10 years after the completion
16 of the paper prepared by Dr. Vander Weide, countless articles that appeared in
17 both business publications and the popular press throughout the last year have
18 shown these biases. *Business Week*, a widely read business publication, contained
19 numerous articles that reported on the problems with securities analysts. These
20 articles include:

21 1. A cover story entitled "How Corrupt is Wall Street" appeared in the May
22 13, 2002 issue of *Business Week*.

1 a) The article mentions that Merrill Lynch, Solomon Smith
2 Barney, Morgan Stanley Dean Witter along with 10 other
3 firms are being investigated by the US Securities and
4 Exchange Commission for unethical practices. See page 37 of
5 May 13, 2002 Business Week article included in (JAR-14) of
6 this testimony.

7 b) According to the article, New York State Attorney General
8 Eliot Spitzer made public e-mail exchanges at Merrill. Thee-
9 mail messages uncovered by Dr. Spitzer showed that
10 "...analysts disparage stocks as 'crap' and 'junk' that they
11 were pushing at the time. The e-mails are so incendiary that
12 they threaten to thrust Wall Street into the sort of public-
13 relations nightmare that Philip Morris, Ford, Firestone, and
14 Arthur Andersen have endured in recent years." (See page 39
15 of Business Week May 13, 2002 included in (JAR-14) of this
16 testimony)

17 c) The article features the following quote from David Komansky,
18 the CEO of Merrill Lynch, by placing it in bold letters and
19 large print:

20
21 We have failed to live up to the high standards that
22 are our tradition, and I want to take this
23 opportunity to publicly apologize to our clients, our
24 shareholders, and our employees.

25
26 In the above quote, Dr. Komansky was responding to what *Business Week*
27 describes as "...the analyst debacle..." See Business Week article "How Corrupt
28 is Wall Street", May 13, 2002, page 42, included in (JAR-14) of this testimony.

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2. The cover of the July 29, 2002 issue of *Business Week* features the article entitled “THE ANGRY MARKET.” The Cover summarizes the article by saying “THE BLUNT MESSAGE: Investors are re-pricing stocks to reflect a more honest picture of earnings, options, and the future.” In a discussion about the inaccurate and misleading earnings reporting done by many companies, *Business Week* says:

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Brokerage-house analysts aren't much help either. They tend to do what companies want. For example, only six of the 21 analysts that have given First Call their estimates for AOL Time Warner Inc.'s 2003 earnings actually provided GAAP figures.

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3. A cover article in the August 5, 2002 issue of *Business Week* is entitled “INSIDE THE TELECOM GAME. How a small group of insiders made billions as the industry collapsed.” The article discusses the buy recommendations consistently made by Dr. Grubman on these companies, and says on page 34:

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Now, investors are questioning whether Grubman was motivated by his true opinions – or by the millions of dollars he received from supporting his telecom clique.

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4. “HOW TO FIX CORPORATE GOVERNANCE” is the cover article in the in the May 6, 2002 issue of *Business Week*. Page 76 of this article says:

29

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31

If investors have learned anything from this crisis, it's that Wall Street's analysts are often loath to put a bad

1 spin on a stock. Historically, “sell” ratings have
2 constituted fewer than 1% of analysts’
3 recommendations, according to Thompson
4 Financial/First Call...It’s more a case of an inherently
5 conflicted system, that is now the focus of a Justice
6 Department investigation.

7
8 ““Investors need to realize that the free research they’re
9 getting is often just a marketing tool”, says Kent
10 Womack, a professor at Dartmouth College’s Amos
11 Tuck school of business.”

- 12
13 5. A June 10, 2002 issue of *Fortune* had an article entitled “In Search of
14 the Last Honest Analyst”. The *Fortune* article noted:

15
16 In fact, stock research sank so low during the bubble that
17 it actually became a contrary indicator of a stock’s
18 performance. Researchers at the University of
19 California and Stanford reviewed almost 40,000 stock
20 recommendations from 213 brokerages during the year
21 2000. The most highly rated stocks had a -31% return
22 for the year, according to the study. Meanwhile, the
23 stocks least favorably recommended (that is, the sells)
24 soared an annualized 49% -- a differential of 80
25 percentage points. (See Fortune.Com “In Search of the
26 Last Honest Analyst”, June 2002, page 1 of 2 in JAR-
27 14)

- 28
29 6. A September 24th, 2002 *Wall Street Journal* article entitled “Will
30 Grubman Case Tone Down the Exaggeration by Analysts?” states the
31 following:

32
33 During the 1980s and 1990s, analysts often served as quasiadvocates for
34 companies that hired their firms for investment-banking work,
35 accompanying them on road shows to sell their stock, setting up one-on-
36 one meetings between management and institutional investors, and
37 proffering their access to management to give an unofficial version of the
38 companies’ view of business developments. (Wall Street Journal “Will

1 Grubman Case Tone Down The Exaggeration by Analysts?" September
2 24, 2002, starting on pages C-1 and C-3, included in JAR-14JAR-14).
3

4
5 7. On October 22, 2002, a *Wall Street Journal* article entitled
6 "Massachusetts Claims CSFB Stock Reports Led Investors Astray"
7 appeared on pages C-1 and C-10. Following are some highlights from
8 this article:

9
10 The complaint [by the Secretary of the
11 Commonwealth of Massachusetts] alleges CSFB misled
12 investors by allowing its investment-banking division –
13 in particular, star Frank Quattrone – to exert undue
14 influence on the firm's research department.

15 The complaint which echoes one filed earlier this
16 year by Elliott Spitzer against Merrill Lynch & Co. will
17 no doubt add to investor concern that Wall Street
18 peddled research it didn't believe only to get its hands
19 on the much more lucrative investment-banking fees.

20 'The presumption that every firm engaged in this
21 behavior is fair,' says Roy Smith, a professor of finance
22 at New York University and a former partner at Goldman
23 Sachs Group, Inc. 'It reminds me of how we used to talk
24 in the locker room after a football game. That talk
25 happens all the time, but it would sure be embarrassing if
26 anyone ever recorded it.'

27 See: Wall Street Journal, October 22, 2002, page C-1 and C-10, included in Exhibit
28 ____ (JAR-14).
29

30 Q. WHAT DO YOU CONCLUDE FROM THESE ARTICLES?

31 A. I conclude that 'analysts' earnings per share forecasts have a strong tendency to
32 be overly optimistic and that investors are now aware of this over-optimism.
33 Therefore, especially if 'analysts' five-year earnings per share growth rate
34 forecasts are used in a DCF model, the true cost of equity as expected by
35 investors will have a strong tendency to be substantially overstated.

1

2 **D. UPWARD ADJUSTMENT FOR QUARTERLY DIVIDEND PAYMENTS**

3

4 Q. WHY WAS DR. VANDER WEIDE WRONG TO INCREASE HIS DIVIDEND

5 YIELD TO REFLECT THE QUARTERLY PAYMENT OF DIVIDENDS?

6 A. Dr. Vander Weide's approach to escalating the dividend yield for the impact of

7 quarterly compounding is wrong because it provides only part of the story. If it is

8 correct to adjust the dividend yield upwards to account for quarterly

9 compounding, then it is just as correct to adjust the return on equity DOWN to

10 adjust for the daily compounding that occurs because a company earns its return

11 on equity every day as revenues are collected and a DOWNWARD adjustment to

12 the growth rate because if a company pays dividends quarterly, it has less use of

13 the earnings to create growth. These downward adjustments to the return on

14 equity (adjustments Dr. Vander Weide fails to consider) more than offset his

15 upward adjustment to the dividend yield.

16

17 Q. DID DR. VANDER WEIDE MAKE ANY OF THOSE DOWNWARD

18 ADJUSTMENTS?

19 A. No. Therefore, his quarterly dividend adjustment is incomplete and serves only

20 to provide an upward bias to his DCF result.

21

22

23

1 **E. Dr. Vander Weide's Risk Premium Method**

2

3 Q. PLEASE BRIEFLY DESCRIBE THE RISK PREMIUM METHOD.

4 A. The risk premium method estimates the cost of equity by analyzing the historic
5 difference between the cost of equity and a related factor such as the rate of
6 inflation or the cost of debt.

7

8 Q. PLEASE COMMENT ON THE RISK PREMIUM METHODS AS PRESENTED
9 BY DR. VANDER WEIDE.

10 A. Dr. Vander Weide applies the risk premium method by computing the difference
11 in the returns earned by common stocks as compared to the return earned on
12 bonds in a variety of different ways. However, in different combinations, these
13 approaches rely upon the following flaws:

14 1. The overstating of historic actual returns by using the arithmetic average
15 to compute historic actual differences in earned returns rather than the geometric
16 or compound returns;

17

18 2. The reliance on a risk premium computed from Dr. Vander Weide's
19 flawed approach to the DCF method;
20 and/or

21

22 3. Ignoring the persistent and substantial drop in risk premiums that has been
23 occurring for decades.

24

25 In addition to improperly computing the risk premium for the reasons stated
26 above, Dr. Vander Weide's risk premium approach is also flawed because he
27 incorrectly concludes that the risk premium between debt and equity are
28 constant, when they are not. As I have shown earlier in this testimony, empirical

1 evidence, financial theory, and financial articles all show that the risk premium
2 as measured against interest rates has been anything but constant. It is risk
3 premiums measured against the inflation rate, not interest rates, which have
4 shown to be reasonably constant.

5
6 Q. PLEASE EXPLAIN THE PROBLEMS CAUSED BY USING THE
7 ARITHMETIC METHOD TO QUANTIFY THE RISK PREMIUM.

8 A. As will be explained in detail later in this testimony, textbooks, the U.S.
9 Securities and Exchange Commission ("SEC"), and Value Line all have
10 recognized that the only proper way to measure long-term historic actual earned
11 returns is to use the geometric mean, not the arithmetic mean put forward by
12 Dr. Vander Weide. In contrast, Dr. Vander Weide used the arithmetic mean.
13 The arithmetic mean is specifically identified by several sources as a method that
14 will specifically result in an answer that is upwardly biased.

15
16 Q. IS THERE A MATHEMATICAL RELATIONSHIP BETWEEN THE
17 GEOMETRIC AVERAGE AND THE ARITHMETIC AVERAGE?

18 A. Yes. Page 24 of the third edition of *Stocks for the Long Run* by Professor Jeremy
19 J. Siegel © 2002 contains the following:

20 The geometric return is approximately equal to the arithmetic return
21 minus one-half of the variance σ^2 of yearly returns $r_G = r_A - 1/2 \sigma^2$.

22 Investors can be expected to realize geometric returns only
23 over long periods of time. The average geometric return is always
24 less than the average arithmetic return except when all yearly returns
25 are exactly equal. This difference is related to the volatility of yearly
26 returns.

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As correctly explained above, the only reason the arithmetic average is higher than the geometric average is because of the volatility of yearly returns. Therefore, from the perspective of the cost of equity to allow a regulated utility, the correct return is the geometric return. The geometric return, if allowed, will be the return the utility company is given a reasonable opportunity to earn. If there is a difference between the geometric return and the arithmetic return, for a regulated utility this difference will occur simply because a utility company's stock price will fluctuate up and down even though the allowed return on equity remains fixed at least until the next rate case.

Q. HAVE YOU SEEN COMPANY WITNESSES WHO USE THE ARITHMETIC AVERAGE CLAIM THAT THE GEOMETRIC AVERAGE IS THE CORRECT AVERAGE TO USE WHEN MEASURING HISTORIC RETURNS, BUT THE ARITHMETIC AVERAGE IS SOMEHOW CORRECT FOR FORECASTING FUTURE RETURNS?

A. Yes, I have seen this argument. But, given that the difference between the geometric return and the arithmetic return is due to volatility and not the true return actually being achieved, an argument that claims a different measurement technique applies to historic data than to forecast data is incorrect. Consider the following example. Assume that the U.S. Government issued a 30-year bond 15 years ago that pays an annual interest rate of 5.0% on the face amount of the bond. Further assume that although interest rates fluctuated over the last 15

1 years, the current interest rate demanded by investors happens to be 5% today.
2 Under these assumptions, over the last 15 years, the price of the bond has gone
3 up in some years and gone down in other years. But, if the current interest rate
4 demanded by investors on this bond is still the same 5% as was demanded by
5 investors at the time of the original issuance, the bond will be selling for the same
6 price as it did when originally issued 15 years ago. Because of this fluctuation, if
7 the total return (price appreciation or price depreciation plus the 5% interest
8 income) is measured using the arithmetic average, then the measured return will
9 include the 5% real return actually obtained by investors plus an additional
10 illusory return cause by volatility rather than an actual return received by the
11 investor. From the perspective of the investor who is forecasting the return on
12 this 5% government bond with 15 years remaining, we know with certainty that
13 the accurate forecasted future return will be 5% per year. We also can be
14 confident that interest rates will fluctuate over the next 15 years. Therefore, this
15 fluctuation will cause the arithmetic return measurement to be higher than the 5%
16 annual return even though the 5% return is the only possible return an investor
17 who holds this bond to maturity could get.

18

19 Q. IS IT THE 5% RETURN ON THE TREASURY BOND OR IS IT THE
20 ARITHMETIC AVERAGE RETURN THAT IS ANALAGOUS TO THE
21 ALLOWED RETURN ON EQUITY TO A REGULATED UTILITY
22 COMPANY?

1 A. The 5% coupon return is the return that is analogous to the allowed return.
2 Therefore, even if we were to attempt to satisfy the investor who was incorrectly
3 led to believe that he or she would achieve the arithmetic average and not the
4 geometric average, the return based upon the geometric average should form the
5 return allowed. Then, an investor who wishes to be fooled into achieving a
6 higher return than is achieved by the geometric average will continue to be under
7 the misconception that he or he is earning more than the geometric average. This
8 can happen because the stock price fluctuation will still produce annual returns
9 that, under the arithmetic average method, will appear to be higher than the
10 allowed geometric return.

11 Consider the problem that would develop if allowed returns were errantly
12 erroneously? set based upon the arithmetic average rather than the geometric
13 average. If a utility company is allowed to earn a return on rate base equal to the
14 arithmetic average, then the normal stock price fluctuations would cause the new
15 arithmetic average measured result to continue to exceed the old allowed
16 arithmetic average. A repetition of the error caused by using the arithmetic
17 average, if repeated in the next rate case, would cause yet a further ratcheting up
18 of the allowed return in each future rate case where this mistake to use the
19 arithmetic average is repeated.

20

21 Q. CAN YOU PROVIDE A MATHEMATICAL EXAMPLE THAT SHOWS WHY
22 RISK PREMIUMS BASED UPON HISTORIC ARITHMETIC RETURNS
23 ARE IMPROPER?

1 A. Yes. As previously stated, arithmetic average returns overstate the actual returns
2 received by investors because arithmetic returns measure volatility, not actual
3 returns earned by investors. The more variable historic growth rates have been,
4 the more his method exaggerates actual growth rates. Arithmetic average returns
5 ignore the impact of compound interest. For example, if a company were to
6 have a stock price of \$10.00 in the beginning of the first year of the
7 measurement period and a \$5.00 stock price at the end of the first year, an
8 arithmetic average approach would conclude that the return earned by the
9 investor would be a loss of 50% $[(\$5-\$10)/(\$10)]$. If, in the second year, the
10 stock price returned to \$10.00, then the arithmetic average would compute a gain
11 of 100% in the second year $[(\$10-\$5)/(\$5)]$. The arithmetic average approach
12 would naively average the 50% loss in the first year with the 100% gain in the
13 second year to arrive at the conclusion that the total return received by the
14 investor over this two year period would be 25% per year $[(-50\% +100\%)/2$
15 $\text{years}]$. In other words, the arithmetic average approach is so inaccurate that it
16 would conclude the average annual return over this two year period was 25% per
17 year even though the stock price started at \$10.00 and ended at \$10.00. The
18 geometric average would not make such an error. It would only consider the
19 compound annual return from the beginning \$10.00 to the ending \$10.00, and
20 correctly determine that the annual average of the total returns was not 25%, but
21 was zero.

22 In order to protect investors from misleading data, the SEC requires mutual
23 funds to report historic returns by using the geometric average only. The

1 arithmetic average is not permitted. The geometric average, or SEC method, has
2 the compelling advantage of providing a true representation of the performance
3 that would have actually been achieved by an investor who made an investment
4 at the beginning of a period and re-invested dividends at market prices
5 prevailing at the time the dividends were paid.

6
7 Q. DOES THE FINANCIAL COMMUNITY COMPUTE HISTORIC ACTUAL
8 ACHIEVED RETURNS BASED UPON ARITHMETIC MEANS OR
9 GEOMETRIC MEANS?

10 A. As shown earlier in this testimony, the financial community (as represented by
11 articles from *The Wall Street Journal* and from *Business Week*) refers to
12 geometric averages when evaluating historic returns. Additionally, an article on
13 page 92 of the August 16, 1999 issue of *Fortune* magazine refers to the return
14 that is equal to the geometric mean from Ibbotson Associates as "...the oft-
15 quoted calculation..." of historic actual returns on common stocks. The article
16 does not even mention the number that is equal to the historic arithmetic return.

17
18 Q. DO FINANCIAL TEXTBOOKS SUPPORT THE USE OF THE GEOMETRIC
19 AVERAGE FOR COMPUTING HISTORIC ACTUAL RETURNS?

20 A. Yes. For example, the textbook *Valuation. Measuring and Managing the Value*
21 *of Companies*, by Copeland, Koller, and Murrin of McKinsey & Co. , John Wiley
22 & Sons, 1994, in a description of how to use the Ibbotson Associates data states
23 the following on pages 261-262:

1 We use a geometric average of rates of return because
2 arithmetic averages are biased by the measurement period. An
3 arithmetic average estimates the rates of return by taking a simple
4 average of the single period rates of return. Suppose you buy a share
5 of a nondividend-paying stock for \$50. After one year the stock is
6 worth \$100. After two years the stock falls to \$50 once again. The
7 first period return is 100 percent; the second period return is -50
8 percent. The arithmetic average return is 25 percent [(100 percent -
9 50 percent)/2]. The geometric average is zero. (The geometric
10 average is the compound rate of return that equates the beginning and
11 ending value.) **We believe that the geometric average represents a**
12 **better estimate of investors' expected returns over long periods of**
13 **time.** [Emphasis added]

14
15
16 Similarly, in another textbook discussion that specifically addresses
17 the use of the Ibbotson data, *Financial Market Rates & Flows*, by James C. Van
18 Horne, Prentice Hall, 1990, states the following on page 80:

19 The geometric mean is a geometric average of annual returns,
20 whereas the arithmetic mean is an arithmetic average. For
21 cumulative wealth changes over long sweeps of time, the geometric
22 mean is the appropriate measure.

23
24 The textbook *Investments* by Nancy L. Jacob and R. Richardson
25 Pettit, Irwin, 1988, puts it well when it says:

26 The existence of uncertainty as reflected in a distribution of possible
27 values makes the **expected value**, or arithmetic average rate of return, a
28 misleading and biased representation of the wealth increments which will be
29 generated from multiperiod investment opportunities.

30 The average *annual* rate of wealth accumulation over the investment
31 period, termed the **average annual geometric rate of return**, correctly
32 measures the average annual accumulation to wealth when multiple periods
33 are involved.

34 [Emphasis is contained in the original]
35
36

1 Q. HAS VALUE LINE SAID ANYTHING REGARDING THE USE OF AN
2 ARITHMETIC AVERAGE OR A GEOMETRIC AVERAGE?

3 A. Yes. On May 9, 1997, Value Line issued a report entitled "The Differences in
4 Averaging". This report was contained on pages 6844-6845 of the "Value Line
5 Selection & Opinion" portion of its weekly mailings to subscribers. This report
6 says that:

7
8 (t)he arithmetic average has an upward bias, though it is the simplest
9 to calculate. The geometric average does not have any bias, and thus
10 is the best to use when compounding (over a number of years) is
11 involved.

12
13 The Value Line report then goes on to provide examples that show why the
14 arithmetic average overstates the achieved returns while the geometric average
15 produces the correct result.

16 Ibbotson Associates has also said that it is the geometric average that is "...
17 the correct average to compare with a bond yield..." See page 75 of Stocks,
18 Bonds, Bills, and Inflation 1986 Yearbook contained in (JAR-14).

19

20 On October 8, 2003, The Wall Street Journal published an article entitled
21 "Financial Advisers and Fuzzy Math", contained in (JAR-14). This article starts
22 out by saying:

23 Next time your financial adviser makes a prediction for an
24 average rate of return during an investment pitch, you might want to
25 doublecheck the math.

26 Some financial advisers rely too heavily on a formula known as an
27 arithmetic average, which can be misleading when investing for the long

1 term. Financial advisers who use this formula may be overstating your
2 potential profit and leading you to take risks you might otherwise avoid.
3

4

5 Therefore, when Dr. Vander Weide chose to use the arithmetic average, he
6 chose a method that both a financial textbook and Value Line have specifically
7 noted to be biased. This is not a place to compromise, as the more weight that is
8 given to the arithmetic average result, the larger the upward bias in the risk
9 premium method.
10

10

11 Q. DR. VANDER WEIDE PRESENTS EXHIBIT NO. ____ (JVW-7) IN SUPPORT
12 OF THE USE OF THE ARITHMETIC AVERAGE. PLEASE COMMENT ON
13 THE EXHIBIT.

14 A. Dr Vander Weide's Exhibit No. ____ (JVW-7) establishes a hypothetical
15 example in which an investor starts with an investment that has a 50% chance of
16 returning \$1.30 after 1 year, and another 50% probability of returning \$0.90 after
17 one year. He then goes on to claim that after 2 periods, the total return
18 expectation based on his hypothetical is \$1.21. He uses the numbers he put in his
19 hypothetical to conclude that based upon the arithmetic averaging method, the
20 total return expectation is the correct \$1.21, but he obtains a lower number when
21 he uses the geometric method. A close review of what he has presented shows
22 that he has not applied either the geometric or the arithmetic method properly.
23 Yes, I agree that based upon his hypothetical, the two period return expectation is
24 \$1.21. However, Dr. Vander Weide did NOT apply the geometric or arithmetic

1 mean methods properly. His critical omission was his failure to compound the
2 results over two periods. As shown on Exhibit ____ (JAR-13), the arithmetic
3 mean results in the faulty, overstated conclusion that the return under his
4 hypothetical would be \$1.23, while the geometric mean method produces the
5 correct answer of \$1.21.

6

7 Q. HAVE YOU COMPARED GRAPHICALLY THE CAPITAL APPRECIATION
8 GROWTH RATE USING THE ARITHMETIC AVERAGE METHOD WITH
9 THE CAPITAL APPRECIATION GROWTH RATE THAT IS OBTAINED
10 USING THE SEC METHOD?

11 A. Yes. In Exhibit __ (JAR-13) I show the actual movement of the S&P Utility
12 index from 1928 through 2003. I also show how the index would have behaved
13 on a year-by-year basis using the average growth obtained from the SEC method
14 and using the arithmetic average historic growth rate methodology. The graph
15 illustrates that the arithmetic average calculation of historic actual returns
16 deviates at an ever-increasing rate over time from the actual S&P Utility Index,
17 overstating the total return from 1928-2003 by about 500%. By contrast, the
18 historic actual returns computed using the SEC method is a dramatically more
19 reasonable track of the growth of the S&P utility over time and thus is the proper
20 measure of historic actual return rates realized by investors.

21 In the exhibit, the top line shows that if \$100 had been invested in public
22 utility common stocks from the beginning of 1928 through 2003 and had earned
23 the arithmetic return, the \$100 would have grown to about \$238,000. The dotted

1 line in the graph shows what actually would have happened to a real \$100
2 investment if it had been invested in public utility common stocks. As shown on
3 the graph, the \$100 investment would have actually grown to about \$44,000.
4 While the increase from \$100 to \$44,000 is a very sizeable return, it is far less
5 than the \$238,000 return that would have been achieved if the arithmetic return
6 methodology had been achieved. The smooth line that ends at the same place as
7 the dotted actual return line is the ongoing value of \$100 invested in 1928 that
8 grew at the geometric return rate. Note that the \$100 invested at the geometric
9 return rate is, by 2003, exactly equal to the actual return. Therefore, the
10 geometric return accurately measures the actual return that was achieved from
11 1928 through 2003, but the arithmetic average return exaggerates the actual
12 return by over five times.

13
14 Q. HOW MUCH HIGHER IS THE RISK PREMIUM DIFFERENCE BASED
15 UPON AN ARITHMETIC AVERAGE THAN IT IS BASED UPON A
16 GEOMETRIC AVERAGE?

17 A. From 1928 to 2003, the arithmetic average method (to which Dr. Vander Weide
18 gives weight) produced an indicated risk premium that was 2.13% higher for
19 public utility stocks versus public utility bonds than the risk premium indicated
20 by using the SEC, or geometric average method. The arithmetic median method
21 is essentially identical to the arithmetic mean method and therefore produces an
22 error that is similar to the error produced by the arithmetic average method.

23

1 Q. HAVE RISK PREMIUMS BEEN STABLE OVER THE YEARS?

2 A. No. This is yet another important problem with Dr. Vander Weide's approach to
3 the risk premium method. As I have previously stated, U.S. Federal Reserve
4 Chairman Alan Greenspan has noted that risk premiums have declined. Dr.
5 Vander Weide failed to see this downtrend because he only examined changes
6 from one year to the next without examining the bigger picture.

7

8 Q. WHAT DOES IBBOTSON ASSOCIATES SAY IS THE CURRENT
9 APPROPRIATE RISK PREMIUM?

10 A. Page 189 of the "Stocks, Bonds, Bills, and Inflation" 2004 Yearbook by Ibbotson
11 Associates says:

12 Long-term Market Predictions

13

14 Ibbotson and Chen believe that stocks will continue to provide
15 significant returns over the long run, averaging around 9.22 percent
16 per year, assuming historical inflation rates. The geometric equity
17 risk premium, based on the supply side earnings model, is calculated
18 to be 3.84 percent.

19 Page 181 of the "Stocks, Bonds, Bills, and Inflation" 2005 Yearbook by

20 Ibbotson Associates says:

21

22 Long-term Market Predictions

23

24 Ibbotson and Chen believe that stocks will continue to provide
25 significant returns over the long run, averaging around 9.52 percent
26 per year, assuming historical inflation rates. The equity risk
27 premium, based on the supply side earnings model, is calculated to
28 be 4.08 percent on a geometric basis and 6.14% on an arithmetic
29 basis.

30

1 Q. HOW HAS DR. VANDER WEIDE QUANTIFIED THE RISK FREE RATE
2 THAT HE USED IN HIS RISK PREMIUM ANALYSES?

3 A. Dr. Vander Weide used the long-term treasury bond rate as his risk free rate.
4 Even though the current long-term interest rate is the reflection of what investors
5 expect to be the long-term interest rate, Dr. Vander Weide replaced the judgment
6 of the market with a forecast of interest rates. The forecast of interest rates he
7 used was 5.70% (see Exhibit No. ___(JVW-9), Page 1) even though the actual
8 long-term interest rate as of the time he prepared his testimony was 4.89% (See
9 the response to Citizen's 3rd Set of Interrogatories, #165, part b, included in
10 Exhibit ___ (JAR-15)). Interestingly, while Dr. Vander Weide based his analysis
11 on the forecast of an increase in Treasury rates, in June the interest rate dropped
12 to about 4.49%.

13

14 Q. DID DR. VANDER WEIDE PRESENT ANY EVIDENCE TO SHOW THAT
15 USING THE FORECAST OF AN ECONOMIC SERVICE WAS MORE
16 ACCURATE THAN DEPENDING ON THE MARKET FORECAST AS
17 EXPRESSED IN LONG-TERM INTEREST RATES?

18 A. No.

19

20 Q. DID YOU PREPARE SUCH A STUDY?

21 A. Yes. From materials available in my office, I was able to review interest rate
22 forecasts made by Value Line going back to 1992. As shown on Schedule JAR-11,
23 Value Line's forecast for interest rates was high by an average of 1.22%. Using
24 actual long-term interest rates as a forecast of what long-term interest rates would be
25 in five years was considerably less inaccurate. While it was also high, it was high by
26 an average of 0.76%.

1 A review of the graph shown on Exhibit __ (JAR-11) shows that in the period
2 from 1992-2005 long-term interest rates were in a significant downtrend. Forecasts
3 were incapable of accurately predicting that downtrend. Whether the downtrend will
4 continue, flatten out, or reverse is unknown. It is unknown to me, and as shown from
5 the review of history it is also unknown to forecasters. It would be unfair to
6 ratepayers to make them pay for an up-trend in interest rates that has been promised
7 year after year by forecasters but has yet to materialize. Dr. Vander Weide's use of
8 the highly inaccurate forecast of long-term interest rates rather than using current
9 actual long-term interest rates has caused his Risk Premium methods to overrate the
10 cost of equity by about 0.8%. This error he has made combined with the others
11 previously discussed help explain why his Risk Premium results produce such
12 unrealistically high cost of equity estimates.

13

14

15 **F. UPWARD ADJUSTMENT FOR FINANCING COSTS**

16

17 Q. YOU STATED IN THE SUMMARY PORTION OF THIS SECTION THAT
18 DR. VANDER WEIDE WAS INCORRECT TO ADD AN ALLOWANCE FOR
19 FINANCING COSTS TO HIS REQUESTED COST OF EQUITY. PLEASE
20 EXPLAIN WHY.

21 A. Dr. Vander Weide's recommendation includes an adjustment to his cost of equity
22 for financing costs. Both the S&P 500 and the other sample companies he
23 examined have common stock that is selling at a market price considerably
24 higher than its book value. The premium received from the sale of stock at these
25 prices would be more than sufficient to fully pay for financing costs.

1

2 Q. WHAT IS THE AMOUNT HE HAS REQUESTED FOR FINANCING COSTS?

3 A. According to his response to 154, part b, Dr. Vander Weide's financing cost
4 request, if adopted by the Commission, would result in an annual cost to
5 ratepayers of \$10.9 million.

6 Q. IS THIS \$10.9 MILLION PER YEAR A REALISTIC REQUEST FOR
7 FINANCING COSTS?

8 A. No. According to the response to Citizen's 3rd Set of Interrogatories, # 155, the
9 total amount for financing costs incurred by the consolidated entities that owned
10 PEF in the last 20 years totaled \$67.1 million, or about \$3.4 million per year.
11 This amount becomes smaller yet after the \$3.4 million is allocated to PEF,
12 showing that even before accounting for the benefits associated with selling new
13 stock in excess of book value the financing cost allowance requested by Dr.
14 Vander Weide is many multiples of the actual incurred financing costs.

15

16 **G. IMPROPER ADJUSTMENT FOR FINANCIAL RISK**

17

18 Q. IS IT PROPER TO MAKE AN ADJUSTMENT FOR THE FINANCIAL RISK
19 OF A COMPANY RELATIVE TO THAT OF THE COMPARATIVE GROUP?

20 A. Yes. Financial risk is influenced by the amount of debt financing a company
21 uses to raise its capital. The greater the amount of debt, the higher the financial
22 risk. As I have shown on my Exhibit ____ (JAR-2), since the common equity ratio
23 of the consolidated Progress Energy contains 41.8% common equity-- which is

1 slightly less common equity than the average of the 44.21% common equity used
2 by the comparative group of electric utility companies-- I recommended that
3 0.10% be added to the 9.00% industry average cost of equity to allow for the
4 higher financial risk of Progress Energy consolidated. I also noted that if the
5 63.08% common equity ratio requested by PEF were to be used, then the cost of
6 equity would decline to considerably below 9.00% because the requested 63.08%
7 common equity ratio is considerably higher than the 44.21% average for the
8 comparative group (Per Exhibit __ (JAR-1), P. 1, the cost of equity associated
9 with a common equity ratio of 63.08% is about 8.50%. However, even if the
10 allowed cost of equity were lowered to 8.50%, the 63.08% is such an inefficiently
11 high common equity ratio that the resultant revenue requirement from this capital
12 structure is still meaningfully above the cost of capital appropriate for the
13 Progress Energy consolidated.)

14 Given these facts, one would expect that if Dr. Vander Weide made the mistake of
15 orienting towards the PEF reported capital structure rather than the Progress Energy
16 consolidated capital structure, he would at least recognize that since the PEF
17 requested capital structure contains considerably more common equity than both
18 Progress Energy consolidated and the comparative group average, he should lower
19 the 11.40% pre-financial risk cost of equity he found appropriate on page 58 of his
20 testimony to reflect the reduced level of debt at the PEF level. But, Dr. Vander
21 Weide did not do this. By incorrectly switching to a market value capital structure,
22 an approach that is not only theoretically flawed but impossible to apply in this case
23 because PEF has no publicly traded stock and therefore no definable market value,

1 Dr. Vander Weide turned what should have been a downward adjustment to his
2 already inflated 11.40% cost of equity into an adjustment that further increased the
3 cost of equity.

4

5 **H. USE OF MARKET VALUE CAPITAL STRUCTURE**

6

7 Q. IS IT IN ANY WAY REASONABLE TO USE THE MARKET VALUE
8 CAPITAL STRUCTURE OF PROGRESS ENERGY AS A PROXY FOR THE
9 MARKET VALUE OF PEF?

10 A. No. Progress Energy's stock price is influenced not only by its book value
11 capital structure, which contains a lower percentage of common equity than
12 PEF's book value capital structure; it is also influenced by the performance of its
13 unregulated operations. Furthermore, management of Progress Energy has
14 specifically stated that it has determined its target capital structure based upon the
15 mid-point goal of a capital structure with 55% debt. That is 55% of *book value*,
16 NOT 55% of market value. See Exhibit __ (JAR-15), the response to Citizen's
17 3rd Set of Interrogatories, Questions # 112,113, and 122.

18

19 Q. HOW DID YOU ARRIVE AT THE NECESSARY COST OF EQUITY
20 ADJUSTMENT?

21 A. I examined, based upon a DCF analysis and variations in changes in capital
22 structure, the cost of equity demanded by investors pursuant to changes in the
23 book level of common equity. Dr. Vander Weide presented no such study.

1

2 Q. IS A DCF-DETERMINED COST OF EQUITY CONSISTENT WITH A
3 MARKET VALUE CAPITAL STRUCTURE DETERMINATION?

4 A. No. To the contrary, the two concepts are incompatible. They do not mix. The
5 DCF method is a carefully designed approach to determining the cost of equity.
6 It is based upon the discounting of future cash flows anticipated by investors.
7 The DCF model is implemented by determining the present value of future
8 expected cash flows. Future cash flows are dependent upon both what a
9 company is able to earn on its current investment, and the return a company is
10 able to earn on reinvested funds.

11 The problem with using a DCF cost of equity in conjunction with a market
12 value capital structure, or any cost rates inferred from a market value capital
13 structure (assuming such a market value analysis were even possible in the case
14 of PEF), is that it incorrectly assumes that a company could reinvest new funds at
15 the same book returns that give rise to market prices even when market prices
16 deviate widely from book value. In reality, when stock price differs from book
17 value, there is a difference in the earnings benefit achieved by investors from the
18 portion of earnings paid out as a dividend and the portion of earnings retained in
19 the business to produce future growth. The greater the market price deviates
20 from book value, the more significant becomes the difference.

21

22 Q. HOW DOES THE DIFFERENCE IN THE RETURN INVESTORS CAN
23 ACHIEVE FROM DIVIDENDS AND THE RETURN A COMPANY CAN

1 EARN FROM INVESTING FUNDS AT BOOK VALUE RELATE TO THE
2 DCF METHOD?

3 A. The DCF method works by separately evaluating dividends and growth.

4 The dividend portion of the cash flow is received by investors. Investors may
5 use that cash for current consumption or use it to re-invest in any available
6 investment (stocks, bonds, etc.) at currently available market prices. The portion
7 of earnings that a company does NOT pay out as a dividend (or retains in the
8 business) is reinvested by the company at whatever return it can achieve on book
9 value. As book value and earnings grow, stock price tends to grow. When, as is
10 generally the case today, book values are lower than market values, the returns
11 that a company can achieve by re-investing the earnings in its own business at
12 book value are higher than when those earnings are paid out as a dividend and
13 then re-invested by the investor at market value.

14 The higher return achievable through the reinvestment of earnings at book
15 value rather than the market value causes a properly applied DCF method to
16 compute a higher cost of equity than if those same earnings were paid out as a
17 dividend. A key benefit of the DCF model is its ability to correctly differentiate
18 between the value of the portion of earnings paid out as a dividend and the
19 portion of earnings retained and re-invested in the business. However, this
20 important attribute of the DCF method is negated by Dr. Vander Weide's use of a
21 market value capital structure to quantify financial risk differentials.

22

1 Q. HOW DOES DR. VANDER WEIDE'S USE OF A MARKET VALUE
2 CAPITAL STRUCTURE NEGATE THE INTEGRITY OF THE DCF MODEL?

3 A. When Dr. Vander Weide proposes to adjust the results of a DCF-derived cost of
4 equity based on market value capital structures, he is effectively making the
5 critical but completely invalid assumption that when investors receive a dividend,
6 those funds can be re-invested by that investor at book value, even though
7 investors have no such opportunity. Investors have to buy new stock at market
8 value, not book value. Yet, when Dr. Vander Weide applies the full DCF return
9 to the market value of the company rather than the book value of the company, he
10 is effectively making the invalid assumption that dividends can be re-invested at
11 book value returns.

12

13 Q. CAN YOU SHOW EMPIRICALLY THAT DR. VANDER WEIDE'S
14 APPROACH OF APPLYING A DCF DERIVED COST OF EQUITY TO A
15 MARKET VALUE CAPITAL STRUCTURE IS CONTRARY TO THE
16 REALITIES OF THE FINANCIAL MARKETPLACE?

17 A. Yes. The inconsistency between a market value capital structure and the DCF
18 cost of equity is so substantial that it is easy to observe. By recommending that a
19 company should be allowed to earn its DCF return on the market value of its
20 investment rather than the book value of its investment, Dr. Vander Weide is
21 saying that fully competitive companies can earn this DCF return on the market
22 value. However, in reality this is far from the truth. Consider the following:
23 According to page MW 58 of the June 13, 2005 issue of Barron's, the earnings

1 yield (earnings divided by price) on the S&P 500 index is 5.04%. This means
2 that the return on market value for the S&P 500 that investors in these mostly
3 competitive industrial companies are earning, is no where near the cost of equity
4 indicated by the DCF method. In other words, an “apples to apples” comparison
5 of market values to earnings shows that the actual earnings on market value that
6 are being achieved by competitive firms are dramatically lower than the cost of
7 equity indicated by the DCF method. This illustrates that there is a huge internal
8 inconsistency in the way Dr. Vander Weide determines his recommended
9 financial risk adjustment based on market value capital structure and the way the
10 cost of the components of that capital structure are determined. The end result of
11 the inconsistencies in the way Dr. Vander Weide proposes to quantify the
12 financial risk differential for PEF is that Dr. Vander Weide’s cost of equity
13 recommendation is even more overstated than if he had not made the adjustment
14 at all.

15
16 Q. ARE THERE ANY OTHER SIGNIFICANT PROBLEMS WITH DR. VANDER
17 WEIDE’S PROPOSED APPROACH TO ADJUSTING FOR FINANCIAL RISK
18 BASED ON MARKET VALUE?

19 A. Yes. He has proposed that PEF be allowed to earn 12.3% on equity with a book
20 value capital structure containing 63.08% common equity. (See Schedule JAR 1,
21 P. 2). However, the market value exists only for Progress Energy. Progress
22 Energy has a book value capital structure containing 41.8% common equity.
23 According to Value Line, Progress Energy is expected to earn 9.00% on its book

1 common equity. To the extent investors agree with Value Line, then the stock
2 price of Progress Energy is a function of this return on book equity expectation of
3 9.00% on a capital structure containing 41.9% common equity. If Progress
4 Energy's investors expected earnings as high as those recommended by Dr.
5 Vander Weide, then the stock price of Progress Energy would be considerably
6 higher than the one used by Dr. Vander Weide to quantify financial risk.
7 Therefore if, in spite of all the mathematical flaws with the market value capital
8 structure proposal made by Dr. Vander Weide, one wanted to use this seriously
9 flawed approach, it would be necessary to make an adjustment to the market
10 value capital structure analysis to factor in the stock price that would exist if Dr.
11 Vander Weide's recommendation were adopted. Given that the average future
12 return on equity expectation for the comparative group of companies selected by
13 Dr. Vander Weide is for a return on book equity lower than the unadjusted 11.4%
14 recommended by Dr. Vander Weide, the net effect of considering the change in
15 future expected return on book equity would be to switch Dr. Vander Weide's
16 proposed adjustment to the cost of equity based on market value capital structure
17 from an addition to a subtraction.

18

19 **IX. COMMENTS ON THE TESTIMONY OF MR. POURTUONDO**

20

21 Q. HAVE YOU READ THE SECTION OF THE TESTIMONY OF MR.
22 PORTUONDO THAT RELATES TO CAPITAL STRUCTURE?

1 A. Yes. I am aware that on pages 27-31, Mr. Portuondo has proposed numerous
2 adjustments to capital structure. These adjustments are:

3 1. An adjustment to avoid the "...ongoing punitive effect of the costs the
4 Company agreed to absorb in the settlement of an investigation into
5 an unplanned outage at the Crystal River Unit 3 unclear unit..."

6
7 2. An adjustment to the equity component "... to recognize the treatment
8 of its long-term purchase power agreements..." by debt rating
9 agencies,

10
11 3. An adjustment "... to directly assign commercial paper as the source
12 of capital for funding the unrecovered fuel costs on PEF's balance
13 sheet..."

14

15 Q. DO YOU AGREE WITH THESE PROPOSED ADJUSTMENTS?

16 A. No.

17

18 Q. PLEASE EXPLAIN WHY YOU DISAGREE WITH MR. PORTUONDO'S
19 PROPOSAL TO MAKE AN ADJUSTMENT TO ELIMINATE THE
20 IPUNITIVE EFFECTS OF THE UNPLANNED CRYSTAL RIVER OUTAGE.

21 A. Page 28 of Mr. Portuondo's testimony explains that this unplanned Crystal River
22 outage occurred back in 1996. While the Company may have taken a write-off as
23 a result of that outage that could have caused a temporary distortion of capital
24 structure, in the years that have passed good management would have long ago
25 addressed any capital structure distortions. Good management controls capital
26 structure through mechanisms such as issuing or buying back common equity,
27 dividend policy, and issuing or buying back debt. Good management sees to it
28 that the capital structure it implements reasonably approximates the capital

1 structure that produces the lowest overall cost of capital. After approximately 9
2 years, the management of PEF and Progress Energy consolidated has had far
3 more than enough time to revise capital structure ratios to offset any temporary
4 imbalance that might have been caused by the Crystal River write-off.

5 Even if it were true (which it is not) that capital structure is merely an
6 accident of history and not controlled by good management, then such a way of
7 thinking would open the door to an unwieldy number of adjustments. For
8 example, to the extent that PEF earned more than its cost of equity in any year,
9 the same logic that would support the sustained adjustment for the Crystal River
10 write-off that occurred 9 years ago would support the reduction of the balance of
11 common equity in the capital structure to eliminate the impact of any over-
12 earnings that might have occurred in the past. Otherwise, ratepayers would be
13 double-penalized for over earnings.

14
15 Q. PLEASE RESPOND TO MR. PORTUNDO'S PROPOSAL TO MAKE A
16 CAPITAL STRUCTURE ADJUSTMENT FOR RATING
17 AGENCIES'TREATMENT OF PURCHASED POWER COSTS.

18 A. Once again, Mr. Portundo's position fails to consider what good management
19 does. When striving to determine the proper capital structure to use to minimize
20 the cost of capital, good management considers all important factors. To the
21 extent that the way rating agencies treat purchased power costs influences the
22 proper capital structure, then this is taken into consideration in the actual
23 implementation of the capital structure. If management has already taken the

1 impact of purchased power on the proper capital structure implementation into
2 consideration, then an adjustment such as the one proposed by Mr. Portuondo
3 would only be duplicative. If management has not taken purchased power into
4 consideration, Mr. Portuondo's proposed adjustment would not make up for the
5 management error, as such a company would still have the inadequate amount of
6 common equity in the capital structure irrespective of whether the adjustment is
7 or is not made in a rate case. Therefore, either way one looks at it, Mr.
8 Portuondo's proposal to increase the common equity ratio for ratemaking
9 purposes based upon purchased power is wrong. The existence of purchased
10 power is part of the information that tells management what capital structure
11 should be implemented, not what adjustment should or should not be made in a
12 rate case to whatever capital structures management has already implemented.

13

14 Q. PLEASE RESPOND TO MR. PORTUONDO'S PROPOSAL TO EXCLUDE
15 COMMERCIAL PAPER ASSOCIATED WITH UNRECOVERED FUEL
16 COSTS.

17 For reasons explained earlier in this section of my testimony, the consolidated capital
18 structure is the capital structure that is best indicative of the capital structure that
19 is actually financing the operations of PEF. Assigning the consolidated capital
20 structure to PEF already results in a conservatively high level of common equity
21 in the capital structure for PEF, given the higher risk of the unregulated
22 operations of Progress Energy.

23 **X. RESPONSE TO DR. CICCETTI' S PROPOSED "BONUS."**

1 Q. DO YOU AGREE WITH DR. CICHETTI'S PROPOSAL TO "REWARD"
2 PROGRESS ENERGY WITH AN EXPLICIT ADDER TO ITS APPROVED
3 RETURN?

4 A. No. Without accepting his premise that PEF has demonstrated superior
5 performance, such a reward is inappropriate, unnecessary, and more than likely
6 would be counterproductive, in that it would provide inappropriate incentives to
7 PEF.

8 Q. WHY DO YOU SAY SUCH AN AWARD IS UNNECESSARY AND
9 INAPPROPRIATE?

10 A. Because a regulated entity such as Progress Energy already benefits any time it
11 succeeds in keeping costs down.

12

13 Q. PLEASE EXPLAIN HOW REGULATED COMPANIES BENEFIT BY
14 KEEPING COSTS DOWN.

15 A. As Dr. Cicchetti notes on page 39 of his testimony, PEF has not had a base
16 rate increase since 1993. This means it has been able to earn at least as much
17 if not more than it perceived to be its cost of capital. This has provided a
18 powerful incentive for PEF to keep costs down. Another incentive to keep
19 costs down is that a company that keeps costs under better control is less
20 likely to be penalized in a rate case for incurring imprudent expenses.

21

1 Q. WOULD PROVIDING A HIGHER RETURN ON CAPITAL HIGHER
2 THAN THE COMPANY'S COST OF CAPITAL CREATE AN
3 INCENTIVE FOR FURTHER COST CUTTING MEASURES?

4 A. No. The higher the return on capital, the more difficult it is for a company to
5 be able to justify making an incremental investment that might be designed to
6 reduce expenses.

7

8 Q. IF THE BONUS RETURN WERE TO BE GRANTED, WOULD THIS
9 PROVIDE AN INCENTIVE TO WORK HARDER FOR FUTURE
10 PRODUCTIVITY GAINS?

11 A. No. If the requested bonus (that amounts to a cost to customers in excess of \$20
12 million per year) were granted, the extra, unnecessary return would go to
13 stockholders. It is the employees of PEF-- whose salaries are paid by ratepayers--
14 - who implement the cost savings. To the extent PEF employees are paid
15 bonuses or receive pay raises for good performance, ratepayers pay for this also.
16 Therefore, any bonus return to investors would not only be duplicative, but
17 would be paid to an entity that does not provide any cost savings.

18

19 Q. IS THERE A REASON WHY THE COMMISSION SHOULD CONSIDER A
20 RATE OF RETURN PENALTY INSTEAD OF A BONUS?

21 A. Yes. As stated previously, the capital structure and cost of equity requests in
22 this case are extremely aggressive. Furthermore, the inflation of the common
23 equity balance reported by PEF would make the earnings surveillance results

1 appear to show a lower actual return on equity than would be shown if a more
2 realistic capital structure were maintained. These measures combine to show an
3 overly strong desire on the part of management to take actions that are contrary
4 to the best interests of ratepayers. While I have not made a specific proposal to
5 lower the allowed return on equity to punish management for taking such an
6 overly aggressive posture, the Commission would be far more justified to
7 provide a penalty to the return on equity in this case than to provide the
8 requested bonus.

9
10 **XI. CONCLUSION**

11
12 Q. PLEASE SUMMARIZE YOUR RECOMMENDATIONS IN THIS CASE.

13 A. PEF should be allowed an overall cost of capital of 6.65%. This is based upon a
14 cost of equity of 9.10%. This cost of equity should be applied to a capital
15 structure containing 41.8% common equity on a financial basis, which equates to
16 38.32% on a Florida regulatory basis. The capital structure I have recommended
17 is equal to the actual capital structure being used by Progress Energy consolidated
18 and is very similar to the average capital structure of the comparative electric
19 companies selected by Dr. Vander Weide for use in this proceeding. My
20 recommended capital structure, not the one recommended by Dr. Vander Weide,
21 is the capital structure the management of Progress Energy has found to be
22 appropriate for its operations.

1 Use of the capital structure supported by Dr. Vander Weide and Mr.
2 Portuondo to set rates would provide an incentive for the capital structure of PEF
3 to stay effectively weaker than if my capital structure is used. This is because
4 allowing the company to earn a return on the artificial PEF capital structure
5 would enable the Company to over-earn on the equity actually provided by the
6 Progress Energy stockholders. Since the consolidated capital structure has a huge
7 influence on the bond ratings of PEF, providing an incentive for the consolidated
8 Progress Energy to continue to maintain a capital structure with a debt load
9 towards the weaker end of the BBB bond rating category is not in the best
10 interests of PEF ratepayers, especially if PEF ratepayers are already paying the
11 higher rates that would otherwise be sufficient for a stronger bond rating.

12 Instead of providing a disincentive, the Commission could provide an
13 incentive for the Company to strengthen the consolidated capital structure of PEF
14 by using the same capital structure management focuses on – the consolidated
15 Progress Energy capital structure.

16 Finally, PEF's exaggeration of its true capital structure by making internal
17 bookkeeping entries and other proposed adjustments combined with Dr. Vander
18 Weide's adjustment to increase his otherwise more traditionally inflated cost of
19 equity claim based on his market value capital structure adjustment must be
20 recognized for what it is: an excessive request that should not be given any
21 credence by the Commission.

22

1 In combination with OPC's other recommendations and adjustments, my
2 recommendation will result in a fair return on PEF's investment—one that will
3 preserve PEF's financial integrity and access to capital markets at the same time
4 that it prevents subsidization of the parent in the form of excessive revenue
5 requirements and eliminates any disincentive for the parent to address its capital
6 structure needs.

7

8 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

9 A. Yes.

1 SECTION I: QUALIFICATIONS AND INTRODUCTION

2

3 Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

4 A. My name is Jacob Pous and my business address is 12113 Roxie Drive, Suite 110,
5 Austin, Texas 78729.

6

7 Q. WHAT IS YOUR OCCUPATION?

8 A. I am a principal in the firm of Diversified Utility Consultants, Inc. ("DUCI"). A
9 copy of my qualifications appears as Exhibit _ (JP-Appendix A)).

10

11 Q. PLEASE DESCRIBE DIVERSIFIED UTILITY CONSULTANTS, INC.

12 A. DUCI is a consulting firm located in Austin, Texas with an international client
13 base. The personnel of DUCI provide engineering, accounting, economic, and
14 financial services to its clients. DUCI provides utility consulting services to
15 municipal governments with utility systems, to end-users of utility services, and
16 to regulatory bodies such as state public service commissions. DUCI provides
17 complete rate case analyses, expert testimony, negotiation services, and litigation
18 support to clients in electric, gas, telephone, water, sewer, and cable utility
19 matters.

20 Q. HAVE YOU PREVIOUSLY TESTIFIED IN PUBLIC UTILITY
21 PROCEEDINGS?

22 A. Yes. Appendix A also includes a list of proceedings in which I have previously
23 presented testimony. In addition, I have been involved in numerous utility rate

1 proceedings that resulted in settlements before testimony was filed. In total, I
2 have participated in well over 300 utility rate proceedings in the United States and
3 Canada. I have testified on behalf of the staff of five different state regulatory
4 commissions.

5
6 Q. WHAT IS YOUR EDUCATIONAL BACKROUNG?

7 A. As noted in Exhibit _ (JP-Appendix A), I have a B.S. in Engineering and a M. S.
8 in Management.

9
10 Q. WHAT IS YOUR PROFESSIONAL BACKGROUND?

11 A. I am a registered professional engineer. I am registered to practice as a
12 Professional Engineer in the State of Texas, as well as numerous other states.

13
14 Q. ON WHOSE BEHALF ARE YOU PROVIDING THIS TESTIMONY?

15 A. DUCI has been retained by the Florida's Office of Public Counsel ("OPC") and
16 the Florida Industrial Power Users Group ("FIPUG") to address Progress Energy
17 Florida's ("PEF" or the "Company") depreciation aspect of the revenue
18 requirements request pending before the Florida Public Service Commission (the
19 "Commission" or "FPSC") in this docket.

20 SECTION II. OVERVIEW

21
22 Q. WHAT INFORMATION DID YOU REVIEW IN THE COURSE OF
23 PREPARING YOUR TESTIMONY?

1 A. I reviewed the Company's filing, the transcript of the deposition of Mr. Earl
2 Robinson, the consultant who developed the Company's depreciation study but
3 who did not provide direct testimony, responses to interrogatories and requests to
4 produce documents, and certain documents in the public record, including past
5 orders and decisions of the Commission relating to the treatment of depreciation
6 reserve imbalances, as well as A Survey of Depreciation Statistics presented by
7 the American Gas Association Accounting Committee and the Edison Electric
8 Property Accounting & Valuation Committee. As of the filing of this testimony,
9 the Company has still not provided the industry survey data in its possession that
10 OPC requested in discovery. When the information is provided, I may have to
11 supplement my testimony to address the information.

12
13 Q. WHAT STANDARDS DO YOU APPLY TO YOUR REVIEW OF THE
14 COMPANY'S DEPRECIATION REQUEST?

15 A. The standard is the establishment of depreciation parameters that most
16 appropriately result in the Company's recovery of invested capital over the useful
17 life of the investment from those customers who receive the benefits of the
18 investment. While there are different aspects reflected within this overall
19 standard, significant components are the matching principle and the related
20 principle of maintaining intergenerational equity or eliminating intergenerational
21 inequities.

22
23 Q. PLEASE PROVIDE A BRIEF OVERVIEW OF YOUR TESTIMONY.

1 A. My testimony addresses two interrelated areas of the overall depreciation process.
2 The first area is the treatment (rather, the lack thereof) of the excess imbalance in
3 the Company's accumulated provision for depreciation ("reserve"), while the
4 second area is the adjustments necessary to correct inappropriate and
5 unsupportable net salvage proposals for 11 transmission and distribution plant
6 accounts within PEF's depreciation study. It should be noted that to the extent
7 that I do not address a method, procedure, technique, proposal, etc. reflected in
8 the Company's request should not be taken as my agreement with such method,
9 procedure, technique, proposal, etc. A brief summary of each area follows.

- 10 • Excess Reserve - The Company has identified over a half billion
11 dollars of excess reserves in its filing. Any of the Company's main
12 depreciation parameters (life or salvage) that are further adjusted in
13 this case will directly affect the magnitude of excess reserve
14 imbalance. As I will develop in my testimony, because of the use
15 of inappropriate net salvage factors in its depreciation study, the
16 Company has understated the magnitude of the reserve excess.
17 Once the needed corrections are made, the reserve excess is far
18 greater—approximately \$1.2 billion. Given the significant
19 magnitude of the excess reserve imbalance (more than a billion
20 dollars, equal to more than 30% of the Company's book reserve)
21 that I have calculated, the Commission's history of amortizing
22 imbalances in the depreciation reserve over periods shorter than
23 the remaining life, and taking into account the need to accomplish

1 equity to customers on terms that are feasible from the perspective
2 of PEF's financial posture, I recommend that the Commission
3 bifurcate the reserve excess for ratemaking purposes. Specifically,
4 I recommend that the Commission require PEF to amortize the
5 increment of reserve excess that I identified by correcting the
6 inappropriate net salvage factors, plus the surplus balance in the
7 nuclear decommissioning fund, over four years, while leaving
8 undisturbed PEF's proposal to flow the \$504 million reserve
9 excess identified in the Company's study to customers over the
10 remaining lives of the assets. This bifurcation approach is
11 intended and designed to take an initial, but meaningful, step to
12 timely address the severe intergenerational inequity problem that
13 exists in the form of a reserve excess imbalance that totals more
14 than a billion dollars. The bifurcation approach is very
15 conservative, in that it allows for a substantial amount of the
16 excess reserve imbalance to be amortized over the remaining life
17 of the investment as proposed by the Company. This very
18 conservative approach not only provides the Commission and all
19 parties involved a significant comfort level that during the 4-year
20 period between depreciation studies there will not be a dramatic
21 turnaround in the current excess reserve position, but also should
22 eliminate any concern that the Company might not earn a fair and
23 reasonable return on its investment due to my adjustments. My

1 recommendation is to amortize a total of \$713,970,605 excess
2 reserve imbalance as of December 31, 2005 associated with my
3 recommended net salvage adjustments plus the Company's
4 \$129,757,072 excess in its nuclear decommission fund over a 4-
5 year period. This results in a \$210,931,919 annual reduction to
6 revenue requirements. The second portion of my recommendation
7 is to treat the \$504,049,932 of excess reserve identified and filed
8 by the Company over the remaining life of the investment. This
9 treatment does not modify the depreciation rates proposed by the
10 Company, even after recognition of the recommended adjustments
11 to net salvage for the 11 mass property accounts discussed below.

- 12 • Mass Property Net Salvage – The amount of depreciation expense
13 that depreciation rates are designed to recover is a function of three
14 factors: the investment in the plant, the net amount of any payment
15 the Company receives for the plant upon disposing of it at
16 retirement (gross salvage) and the cost incurred to remove the plant
17 from service (cost of removal). The difference between gross
18 salvage and the cost to remove is referred to as net salvage. If the
19 cost to remove an item of plant is predicted to exceed any salvage
20 payment received, a “negative net salvage” factor will be
21 calculated and incorporated into the analysis as an addition to the
22 plant value that the utility must recover through depreciation rates.
23 If the Company understates the net salvage component (by either

1 underestimating the gross salvage value or overestimating the cost
2 of removing the plant), the depreciation rate that results will be too
3 high and, if left uncorrected, will cause a reserve excess imbalance
4 to result.

5 The Company has proposed modifications to the existing mass property net
6 salvage levels for various transmission and distribution plant accounts.
7 Individually and collectively, the Company's narrative and quantitative
8 presentations do not justify the very large negative salvage calculation that leads it
9 to understate its reserve excess. The Company's proposals are often inadequately
10 supported, or are based on trend analyses that in many instances result in
11 theoretically impossible results. The Company's narrative portions of its
12 presentation essentially state that the basis for its proposals is "experience",
13 "expectations", or "anticipations". As will be shown later in my testimony, these
14 statements are basically meaningless generalizations that are either unsupported
15 or are inaccurate. The quantitative presentation of the Company in many
16 instances is so flawed that even the Company's outside depreciation consultant
17 had to "discount" or ignore his results. Even the Company's historical database is
18 somewhat questionable, since it contains negative values where only positive
19 values normally would be expected. These latter unfortunate situations cannot be
20 corrected, given the Company's policy not to retain the underlying supporting
21 documentation past a 5-year period.

22

1 Based on my review of the information and presentation by the Company, I
2 recommend changes to the net salvage proposed by the Company for 11
3 transmission and distribution accounts. I further recommend that the entire
4 impact of these adjustments be credited back to customers over the 4-year period
5 identified in the above summary addressing the excess reserve adjustment.
6 Alternatively, if these adjustments were to be spread over the remaining life of
7 each investment, it would result in a \$34,541,975 adjustment to requested
8 depreciation expense as set forth on Exhibit _ (JP-1).

9
10 Q. BEFORE PROCEEDING TO THE SPECIFICS OF YOUR TWO
11 RECOMMENDED AREAS OF ADJUSTMENTS, DO YOU WISH TO
12 COMMENT ON ANY ASPECTS OF THIS PROCEEDING THAT YOU
13 REGARD AS UNUSUAL?

14 A. Yes. The Company's presentation of its depreciation request, which reflects over
15 \$300 million of annual depreciation expense, is outside the norm that I have
16 experienced in my 30 years of depreciation analysis. The Company's
17 presentation of its depreciation request is provided in a depreciation study
18 developed by Mr. Earl Robinson of Weber Frick & Wilson Division of AUS
19 Consultants – Utility Services, for plant as of the end of December 2003. The
20 data was then updated for projected plant through the end of 2005. While this pro
21 forma update is itself somewhat unusual, the more unusual aspect of this case is
22 that the individual responsible for the development of the depreciation parameters
23 and rates is not a witness. The depreciation study is being sponsored by Company

1 witnesses Mr. Bazemore and Mr. Portuondo who, according to Mr. Robinson,
2 never met or spoke to Mr. Robinson prior to sponsoring his study and had
3 “absolutely” no input to the preparation of that study. (See Exhibit _ (JP-2), Mr.
4 Robinson’s deposition at pages 24 and 25). This is significant, since Mr.
5 Robinson admitted during his deposition when questioned regarding someone
6 else’s ability to replicate the various parameters and proposals that “certainly
7 another consultant doesn’t have my brain cells.” (Exhibit _ (JP-2), Mr.
8 Robinson’s deposition page 91). In my opinion, it is more than questionable how
9 individuals who are not depreciation experts and who did not participate in the
10 study could understand and support the specific proposals based on the woefully
11 inadequate documentation and presentation of the depreciation study. I must
12 emphasize that I believe the Commission and customers are entitled to a much
13 greater level of qualitative support and specific presentation than has been
14 provided by this Company for its depreciation request. Moreover, one should not
15 confuse the quantity of paper provided that relates to the quantification of the
16 impact of the parameters; with the quality of information that should clearly set
17 forth the support and justification for each selected depreciation parameters.

18
19 SECTION III: DEPRECIATION - GENERAL

20
21 Q. WHAT IS DEPRECIATION?

1 A. There are several definitions of depreciation. The most appropriate definition is
2 one from the Federal Energy Regulatory Commission ("FERC"). The FERC
3 definition for depreciation is as follows:

4 'Depreciation', as applied to depreciable electric plant, means the
5 loss in service value not restored by current maintenance, incurred
6 in connection with the consumption or prospective retirement of
7 electric plant in the course of service from causes which are known
8 to be in current operation and against which the utility is not
9 protected by insurance. Among the causes to be given
10 consideration are wear and tear, decay, action of the elements, and
11 inadequacy, obsolescence, changes in the art, changes in demand
12 and requirements of public authorities.
13

14 Q. IS THERE ADDITIONAL CONSIDERATION IN DEPRECIATION BEYOND
15 THE DEFINITIONS?

16 A. Yes. The definitions provide only a general outline of the overall utility
17 depreciation concept. In order to arrive at a depreciation related revenue
18 requirement in a rate proceeding, a depreciation system must be established.
19

20 Q. WHAT IS A DEPRECIATION SYSTEM?

21 A. A depreciation system constitutes the method, procedure, and technique employed
22 in the development of depreciation rates.
23

24 Q. BRIEFLY DESCRIBE WHAT IS MEANT BY METHOD.

25 A. Method identifies whether a straight-line, liberalized, compound interest, or other
26 type of calculation is being performed. The straight-line method is normally
27 employed for utility depreciation proceedings.

1 Q. BRIEFLY DESCRIBE WHAT IS MEANT BY PROCEDURE.

2 A. Procedure identifies a calculation approach or grouping. For example, procedures
3 can reflect the grouping of only a single item, items by vintage (year of addition),
4 items by broad group ("ALG") or total grouping, and equal life groupings. The
5 ALG procedure is used by the vast majority of both electric and gas utilities. The
6 Company's existing rates rely on the ALG procedure.

7

8 Q. PLEASE BRIEFLY DESCRIBE WHAT IS MEANT BY TECHNIQUES.

9 A. There are two main categories of techniques with various sub groupings. The two
10 main categories are the whole life technique and the remaining life technique.
11 The whole life technique simply reflects calculation of a depreciation rate based
12 on the whole life (e.g., a ten year life would result in a ten percent depreciation
13 rate over the life of a plant, or 1 divided by the life) with the amortization of any
14 reserve imbalance over the remaining life or some shorter period of time.
15 Alternatively, the remaining life technique recognizes that depreciation is a
16 forecast or estimation process that is never precisely accurate and requires true-
17 ups in order to recover only 100% of what a utility is entitled to recover over the
18 entire life of the investment. Therefore, as time passes, the remaining life
19 technique attempts to periodically identify needed adjustments to the estimates
20 and recover the remaining unrecovered balance over the remaining life or other
21 period of time. Many utilities rely on a remaining life technique in utility rate
22 matters. However, where the identified reserve imbalance is so material that
23 recovery over the remaining life would mistreat a generation of customers, to

1 avoid inequities while assuring the company recovers the appropriate amount of
2 expense, the true-up frequently is amortized over periods shorter than the
3 remaining life.

4
5 Q. DO THE METHODS, PROCEDURES AND TECHNIQUES INTERACT WITH
6 ONE ANOTHER?

7 A. Yes. Different depreciation rates will result depending on what combination of
8 method, procedure, and technique is employed. The difference will occur even
9 when beginning with the same average service life and net salvage values.

10
11 Q. WHAT IS NET SALVAGE?

12 A. In order to understand the concept of net salvage, it is beneficial to define net
13 salvage and its various components. Net salvage, as defined by the FERC, and in
14 National Association of Regulatory Utility Commissioner's ("NARUC") Uniform
15 System of Accounts ("USOA") is as follows:

16 Net salvage value means the salvage value of property retired less
17 the cost of removal.
18

19 The definitions of salvage and cost of removal as set forth in Title 18 CFR Part
20 101 and in NARUC USOA are as follows:

21 Salvage value means the amount received for property retired, less
22 any expenses incurred in connection with the sale or in preparing
23 the property for sale; or, if retained, the amount at which the
24 material recoverable is chargeable to Materials and Supplies, or
25 other appropriate amount.
26

1 Cost of removal means the cost of demolishing, dismantling, tearing down or
2 otherwise removing electric plant including the cost of transportation and handling
3 incidental thereto.

4
5 Net salvage is simply the value received for the sale, reuse, or reimbursement of
6 retired property (gross salvage) less the cost of retiring such property (cost of
7 removal), whether the retirement reflects demolition of the item of plant or only the
8 accounting transaction for retiring an item of property in place, abandonment.

9
10 Due to the manner in which net salvage is calculated (gross salvage minus cost of
11 removal), it can be positive or negative. If gross salvage exceeds cost of removal,
12 the net salvage is positive. On the other hand, if the cost of removal is greater than
13 the gross salvage received in the process of retirement of an item of property, then
14 the resulting net salvage value is negative.

15
16 Q. HOW DOES NET SALVAGE IMPACT THE CALCULATION OF
17 DEPRECIATION?

18 A. The intent of the depreciation process is to allow the Company to recover 100%
19 of investment less net salvage. Therefore, if net salvage is a positive 10%, then
20 the utility should only recover 90% of its investment through annual depreciation
21 charges, under the theory that it will recover the remaining 10% through net
22 salvage at the time the asset retires (e.g., $90\%+10\%=100\%$). Alternatively, if net
23 salvage is a negative 10%, then the utility should be allowed to recover 110% of

1 its investment through annual depreciation charges so that the negative 10% net
2 salvage that is expected to occur at the end of the property's life will still leave the
3 utility whole (i.e., $110\% - 10\% = 100\%$).

4
5 Q. PLEASE SUMMARIZE THE GENERAL CONCEPT OF DEPRECIATION
6 FOR UTILITIES.

7 A. The concept of depreciation utilized for utility ratemaking has evolved over time.
8 Currently, there are still many different combinations of methods, procedures, and
9 techniques employed in the development of utility depreciation rates. The issue
10 regarding the correct depreciation system along with the correct net salvage to be
11 employed for utility ratemaking must, among other things, take into account
12 whether the results are in compliance with the requirement of being systematic
13 and rational. In arriving at such conclusion, the regulator must further take into
14 account the quality, quantity, and currentness of data relied upon, as well as the
15 judgment employed by the depreciation analyst. Judgment plays an important
16 role in the establishment of depreciation rates given the subjectivity involved in
17 the various estimation processes. While judgment is critical, that does not mean
18 that an analyst can simply refer to "judgment" as the basis for a proposal without
19 providing meaningful factual support for that "judgment;" nor can "judgment"
20 serve as the basis for ignoring relevant facts. As will be discussed later, Mr.
21 Robinson practices the art of IPSE DIXIT, but fails to provide a logical rationale
22 for his judgment.

23

1 SECTION IV. RESERVE IMBALANCE AND CORRECTIVE ACTION

2

3 Q. FROM A HIGH LEVEL PERSPECTIVE, WHAT IS DEPRECIATION?

4 A. Depreciation is the recovery of invested capital over the life of the investment and
5 from those customers that received the benefit of the investment.

6

7 Q. IS THE RECOVERY OF CAPITAL THROUGH DEPRECIATION A PRECISE
8 PROCESS?

9 A. No. The depreciation process for utility ratemaking relies on forecasting the
10 future life and net salvage of the investment. As with any forecasting process,
11 there are inherent inaccuracies that will exist. In recognition of the inherent
12 inaccuracies, depreciation studies should be performed on a regular basis and
13 should incorporate a true-up provision to address recognized excesses or
14 deficiencies that are quantified.

15

16 Q. HOW ARE RESERVE EXCESSES OR DEFICIENCIES IDENTIFIED?

17 A. The normal process is to calculate what is called a theoretical reserve and
18 compare that to the actual book reserve of the utility. The theoretical reserve is
19 the calculated balance that would be in the accumulated provision for depreciation
20 (FERC Account 108) at a point in time if current depreciation parameters (i.e.,
21 current life and salvage estimates) had been applied from the outset. The
22 theoretical reserve measures the amount of depreciation expense a company needs
23 to have collected in order to be “on schedule” with respect to recovering its

1 investment over the life of the depreciable asset. The book reserve reflects what
2 actually has been collected. One can compare the book reserve to the theoretical
3 reserve. If the book reserve is greater than the theoretical reserve, then the
4 company has collected more than is needed at that point in time. The difference is
5 a reserve excess. If the theoretical reserve is greater than the book reserve, the
6 company has under collected to that point, and a reserve deficiency exists.

7
8 Q. WHAT ARE THE GUIDING PRINCIPLES THAT SHOULD BE
9 CONSIDERED IN DETERMINING THE CAPITAL RECOVERY PATTERN
10 THROUGH DEPRECIATION OVER TIME?

11 A. In my opinion, the overriding considerations of fairness and equity that govern the
12 utility ratemaking process mandate adherence to the matching principle. In other
13 words, the generation of customers that causes an expense or cost to be incurred
14 should be the generation of customers that pays for such expense or cost through
15 the rates charged for usage of the final product, in this case electricity. The
16 matching principle attempts to achieve the goal of eliminating intergenerational
17 inequities. Intergenerational inequities occur when one set or generation of
18 customers pays too much or too little for its use of the investment necessary to
19 provide electricity, and transfers either an undue advantage or undue burden to
20 some future set of customers.

21

1 Q. HAS THIS COMMISSION HISTORICALLY RECOGNIZED THE
2 MATCHING PRINCIPLE WHEN IT COMES TO CAPITAL RECOVERY
3 THROUGH DEPRECIATION?

4 A. Yes. When capital recovery becomes materially imbalanced between generations
5 of customers, as measured by the difference between the theoretical and book
6 reserve, there are two normal industry options employed. The two options for
7 truing-up or correcting the imbalance are (1) to amortize the calculated
8 differences over a short period of time, or (2) to simply implement new
9 depreciation rates based on the remaining life technique where the recovery
10 period is the remaining life. This Commission has established a long and
11 identifiable policy of correcting material reserve imbalances by (1) reserve
12 transfers, (2) one time reserve adjustments based on changes to revenue
13 requirement areas other than depreciation, and (3) amortizing the reserve
14 differences over periods much shorter than the remaining life of the investment.
15 In addition to these practices, this Commission recently approved a settlement in
16 PEF's last rate case, Docket No. 000824-EI. In part, that settlement allowed PEF
17 to reduce depreciation expense by \$250 million during its term and instructed PEF
18 as to how it should allocate the corresponding reduction to the reserve among its
19 various accounts. Rigid adherence to "remaining life" concepts would not have
20 permitted this flexibility. (See Order No. PSC-02-0655-AS-EI, paragraph 10).

21

22 Q. HOW HAVE YOU NORMALLY HANDLED RESERVE IMBALANCE
23 SITUATIONS LIKE THIS?

1 A. I do not recall ever having encountered an identified reserve imbalance of this
2 magnitude. Normally utilities perform frequent depreciation studies and
3 implement the results so as not to get too far out of line with current depreciation
4 expectations. In this case, the Company identified more than half a billion dollars
5 of excess reserve based on its proposed parameters. Rather than acting on such a
6 significant level of excess with an immediate and meaningful response, the
7 Company proposes “business as usual.” That approach would attempt to correct
8 the situation over the average 19.25-year remaining life of all its investment.
9 Particularly in view of the fact that, as I will demonstrate later, the magnitude of
10 the reserve excess is far greater than the amount the Company identified, I do not
11 believe this is an appropriate reaction to the facts and circumstance presented in
12 this case. The magnitude of the intergenerational inequity compels an immediate
13 and sizeable departure from the remaining life approach to mitigate the degree of
14 unfairness that otherwise would be imposed on current customers. It is also worth
15 noting that the Company’s proposed “business as usual” approach differs from the
16 settlement in the last case. In that settlement, all parties agreed to allow PEF to
17 reduce depreciation expense during the term of the stipulation. Whether or not it
18 was intended as a remedial step at the time, the measure prevented PEF’s current
19 reserve excess imbalance from being even more severe.

20

21 Q. HOW DOES THE EXCESS LEVEL OF RESERVE AFFECT REVENUE
22 REQUIREMENTS?

1 A. The effect on revenue requirements of the excess reserve imbalance is significant
2 no matter the approach undertaken to correct this situation. The shorter the period
3 utilized to return the excess to customers, the greater the revenue requirement
4 impact. For example, the Company-identified \$504 million excess reserve is
5 already reflected in the Company's filing and is partially responsible for the
6 Company's recommended decrease in depreciation expense of \$46 million
7 annually. (See Exhibit _ (JP-3), Company's depreciation study at page 2-7,
8 column n). However, had the Company's calculated excess reserve been credited
9 back to current customers in a period shorter than the remaining life utilized by
10 the Company in its calculation, the overall revenue requirement impact would be
11 a decrease in depreciation expense greater than the \$46 million amount proposed
12 by PEF. In fact, had the Company utilized a 4-year amortization period, rather
13 than the remaining life period for the return of excess reserve to customers, it
14 would have resulted in an additional \$80 million annual revenue requirement
15 reduction during the 4-year period (\$504 million divided by 4 less \$46 million).
16 It must be noted that the above example does not take into account the additional
17 impact that results from the necessary adjustments to net salvage parameters that I
18 recommend in the net salvage portion of my testimony.

19
20 Q. CAN YOU PROVIDE EXAMPLES OF THE COMMISSION'S LONG AND
21 IDENTIFIABLE POLICIES TO WHICH YOU REFER?

22 A. Yes. In the area of implementing corrective reserve transferances, some examples
23 of this Commission's previous actions are Gulf Power Company in Docket No.

1 880053-EI and Marianna Electric Division by Florida Public Utilities Company in
2 Docket No. 010669-EI. These examples occurred during the time frame of the
3 1980s through the early 2000s. (See Order Nos.19901, PSC-01-2270-PAA-EI).
4 An example of a Commission action to change the depreciation reserve due to
5 revenue requirements from an area other than depreciation is Tampa Electric
6 Company in Docket No. 860868-EI. (See Order No. 19438). Finally, examples
7 of depreciation reserve differences that the Commission required to be amortized
8 over periods shorter than the average remaining life are General Telephone Co. in
9 Docket No. 840049-TL, City Gas Company in Docket No. 890203-GU, and
10 Florida Power & Light Company in Docket No. 970410-EI. (See Order Nos.
11 14929, 22115, PSC-97-0499-FIF-EI).

12
13 Q. WHAT HAS THE COMMISSION STATED AS ITS UNDERLYING POLICY
14 OR BASIS WHEN ADDRESSING THE TREATMENT OF RESERVE
15 DIFFERENCES OR INTERGENERATIONAL INEQUITIES?

16 A. The Commission has adopted the position that depreciation reserve differences
17 “should be recovered as fast as possible, unless such recovery prevents the
18 Company from earning a fair and reasonable return on its investments.”
19 (Emphasis added) (See Order No. PSC-93-1839-FOF-EI). In another case, the
20 Commission adopted a one-year write-off for a portion of a utility’s reserve
21 deficit by stating that “we believe that it [the deficit] should be written off as
22 quickly as possible.” (Emphasis added) (See Order No. 13918). In yet another
23 case, the Commission addressed the fairness issue as it relates to intergenerational

1 inequity. In establishing a funded nuclear decommissioning reserve the
2 Commission stated “[f]airness dictates that those receiving services and imposing
3 costs be obligated to pay those costs, instead of placing the risk of recovery on
4 other ratepayers who may not get service from the nuclear units.” It went on to
5 state, “that a further delay in changing rates to recognize the responsibility of
6 current ratepayers to pay the full cost of operating the nuclear generators simply
7 continued an already unfair situation. We determined that it was unfair that
8 current ratepayers were not paying their full share and could therefore properly
9 change FP&L’s and FPC’s rates to alleviate unfair, unjust and unreasonable
10 rates.” (Emphasis added). (See Order No. 13427).

11
12 **Q.** IN THE CASES YOU CITED, DID THE AMOUNT OF THE RESERVE
13 IMBALANCE THAT THE COMMISSION DECIDED TO CORRECT OVER A
14 PERIOD SHORTER THAN THE REMAINING LIFE APPROACH A BILLION
15 DOLLARS?

16 **A.** No.

17
18 **Q.** SHOULD THE CORRECTIVE TREATMENT OF A RESERVE IMBALANCE
19 DIFFER DEPENDING ON WHETHER IT IS MATERIAL EXCESS OR A
20 MATERIAL DEFICIENCY?

21 **A.** No. The rationale to be applied to either scenario is identical. In this regard, it is
22 important to note that under the depreciation process the utility will not be

1 “harmed” by a corrective adjustment. The matter is one of the timing of recovery.

2 On the other hand, imbalances have prejudicial impacts on certain customers.

3
4 Q. WHY DO YOU REFER TO MATERIAL IMBALANCES RATHER THAN
5 IMBALANCES IN GENERAL?

6 A. Any process that involves estimates will result in actual values that differ from the
7 predicted values. As previously noted, I do not believe most utilities allow
8 identified imbalances of this magnitude to be created. Generally speaking, by
9 revisiting the reserve situation with a comprehensive study every few years, one
10 would reasonably expect the variance between the theoretical reserve and the
11 book reserve to stay within reasonable bounds. When reserve imbalances occur,
12 they are normally treated through the remaining life process. Not every
13 discrepancy between theoretical and book reserves is so large as to require a
14 departure from the method of recalculating the accrual that will retire the asset
15 over its remaining life. However, the greater the disparity in the reserve, the
16 greater the level of intergenerational inequity that exists. The greater the level of
17 intergenerational inequity, the more compelling becomes the corresponding
18 rationale for addressing the imbalance over a shorter period.

19
20 Q. IS THERE ANY REASONABLE QUESTION IN THIS CASE WHETHER A
21 SIGNIFICANT OR MATERIAL EXCESS IN THE DEPRECIATION
22 RESERVE EXISTS?

1 A. In my view, there is no room for argument on this question. The Company
2 identifies a \$504 million excess in its depreciation study and an additional \$130
3 million excess in its nuclear decommissioning fund. (See Exhibit _ (JP-4)).
4 While the Company's depreciation consultant is willing only to characterize the
5 \$504 million excess identified by his study as "not tiny, and its not huge." (See
6 transcript of Mr. Earl Robinson at page 62, Exhibit _ (JP-2)). I submit that this
7 level of excess must be considered material and significant by any reasonable
8 measuring index. Moreover, the \$504 million size of the reserve excess reported
9 in PEF's depreciation study has been artificially understated by the effect of
10 inappropriate net salvage estimates for PEF's mass property accounts. When
11 restated to adjust for the distortions created by the inappropriate net salvage
12 assumptions, the reserve excess is not \$504 million, but \$1.2 billion. The reserve
13 excess amounts to 30% of PEF's book reserve. The magnitude of the excess is so
14 huge, and the prejudicial impact of the imbalance on current customers is so great,
15 that fairness compels a departure from PEF's "remaining life" approach so that
16 current customers do not continue to subsidize future customers to such a large
17 extent.

18
19 Q. ARE YOU STATING THAT THE COMPANY INTENTIONALLY
20 ACCELERATED THE RECOVERY OF CAPITAL BY EMPLOYING
21 OVERLY AGGRESSIVE DEPRECIATION PARAMETERS IN THE PAST?

22 A. No, in part because I did not investigate the prior depreciation requests to the
23 point where I could determine if the depreciation parameters contained therein

1 could be characterized as being too aggressive at those periods in the past. The
2 fact is that the prior depreciation parameters and actual historical events have
3 resulted in the material excess imbalance that exists today. While it would be
4 interesting to know the cause of each component of the material imbalance from
5 an academic standpoint, the need to correct the imbalance situation now is not
6 dependent on what caused the material excess reserve position. In fact, while
7 some might feel the need to know what precisely caused the material imbalance
8 when determining the corrective option (shorter amortization period or remaining
9 life) to employ, I submit that the customer who has paid more than his cost of
10 service in the past cares less about the factors that led to the over collection and
11 more about the action taken to correct the situation. Moreover, the matching
12 principle is indifferent as to the cause of the intergenerational inequity. The real
13 issue, as previously recognized and acted on by this Commission in the context of
14 reserve deficiencies, is the elimination of the (excess) imbalance “as fast as
15 possible” as previously stated by the FPSC. Finally, while it is easy to identify
16 that a sizable component of the excess reserve is due to the longer expected life of
17 the Company’s nuclear unit, this does not account for the majority of the excess
18 reserve that exists.

19
20 Q. DOES PEF’S DEPRECIATION CONSULTANT BELIEVE THAT IT IS
21 IMPORTANT TO KNOW THE REASONS FOR THE IMBALANCE?

22 A. Yes. He stated in his deposition, “you’ve got to understand part of the reasons
23 why those variances exist.” (See transcript of Mr. Robinson’s deposition at page

1 63, Exhibit _ (JP-2)). He bases his reasoning on his belief that the theoretical
2 reserve calculation “makes an assumption that the current [depreciation] estimates
3 have always been in place, and that’s not true.” (See Exhibit _ (JP-2), Mr.
4 Robinson’s deposition at page 50). Alluding to the fact that a portion of the
5 imbalance results from life extensions, he said, “if you’re going to get that
6 additional life, you’re going to end up spending a whole bunch more money down
7 the road to get those extra lives.” (See Exhibit _ (JP-2), Mr. Robinson’s
8 deposition at page 63).

9
10 Q. DO YOU AGREE WITH PEF’S DEPRECIATION CONSULTANT ON THIS
11 POINT?

12 A. No. First, while the extension of the nuclear unit life has a significant impact on
13 the imbalance, so does the impact of net salvage. In fact, when the Company’s
14 excessive proposals for transmission and distribution plant net salvage are
15 corrected, the imbalance becomes noticeably more attributable to net salvage than
16 to life considerations. Net salvage considerations have nothing to do with
17 “spending a whole bunch more money down the road.” Even if some additional
18 funds are required to obtain longer lives in the future, those costs, if they in fact
19 do occur, will be dealt with appropriately in the future – and by the customers
20 who will benefit from such expenditures. In fact, this is the exact position already
21 reflected in the current depreciation study and affirmed by Mr. Robinson in his
22 deposition where he states, “I am not saying that we should include future
23 additions, which we have not.” (See Exhibit _ (JP-2), Mr. Robinson’s deposition

1 age page 67). In other words, Mr. Robinson contradicted his previously stated
2 belief that one would have to know or understand the reasons for the reserve
3 imbalance. Moreover, if at some potential future period additional funds are
4 required to obtain a longer life, then it must also be recognized that the plant that
5 has lived that long of a period will most likely be heavily depreciated and require
6 a small level of return compared to current levels. That simply means that while
7 future customers may have to pay a high depreciation expense for the new
8 additions necessary to obtain a longer life for the original asset, the older addition
9 will have a much lower annual depreciation level and a much lower return
10 component, more than adequate “balance” if some form of balance is required.

11
12 Q. YOU HAVE USED THE TERM “MATERIAL IMBALANCE” SEVERAL
13 TIMES. IS THERE A PRECISE POINT AT WHICH THE IMBALANCE
14 BECOMES MATERIAL?

15 A. No, not really. However, I am aware of one jurisdiction that has quantified a 5%
16 difference between the theoretical and book reserve as the point at which a
17 correction process will be implemented. Moreover, Mr. Robinson, the
18 Company’s depreciation consultant, stated in his deposition that “to the extent that
19 we’ve increased or we’ve extended life on production plants, on Crystal River,
20 that in itself made a significant difference in the theoretical versus the book
21 [reserve].” (Emphasis added) (See Exhibit __ (JP-2), Mr. Robinson’s deposition
22 at page 63) The imbalance for nuclear plant identified by the Company is 29%.
23 (See PEF’s 2003 depreciation study at page 2-65, Exhibit __ (JP-3)). Accordingly,

1 while we don't know the minimum point at which Mr. Robinson would concede a
2 disparity is "significant", we know he thinks a differential of 29% meets his
3 criteria.

4
5 Q. WHAT PERCENTAGE LEVEL OF RESERVE IMBALANCE EXISTS FOR
6 PEF?

7 A. The Company admits to a 13% excess reserve imbalance as of the end of 2005.
8 (See Exhibit _ (JP-4) response to Citizens-204). This 13% level is prior to any
9 impact associated with the \$130 million excess reserve position in the Company's
10 nuclear decommissioning fund or the additional \$714 million of excess reserve
11 based on my recommended net salvage adjustments to transmission and
12 distribution plant. Recognition of only the additional \$714 million amount would
13 drive the excess to over 30%, or over \$1.2 billion.

14
15 Q. HOW HAS THE COMPANY PROPOSED TO TREAT ITS EXCESS
16 DEPRECIATION RESERVE IMBALANCE?

17 A. The Company proposes to remain silent as it pertains to the significant excess
18 reserve imbalance. It proposes simply to return the excess to customers over the
19 remaining life of the investment.

20
21 Q. WHAT REMAINING LIFE PERIOD IS REFLECTED IN THE COMPANY'S
22 DEPRECIATION STUDY?

1 A. The Company's depreciation study reflects an overall 19.25-year remaining life
2 for its entire remaining unrecovered depreciable investment.

3
4 Q. WHAT IS THE BASIS FOR THE COMPANY'S TREATMENT OF THIS
5 MATTER?

6 A. The Company's depreciation study is silent on this matter. While we do not know
7 with certainty if the Company made a conscious decision in establishing its
8 official position, Mr. Robinson through the depreciation study employed the
9 remaining life technique. In his deposition, Mr. Robinson said, "I have been a
10 staunch supporter of remaining life depreciation for many years. Could there be a
11 situation where some remedy would be required to recover investments over
12 something other than remaining life, certainly that's something you would have to
13 look at on a case-by-case basis, but I think it would have to be a fairly severe
14 circumstance." (Emphasis added) (Exhibit _ (JP-2), Mr. Robinson's deposition
15 transcript at pages 49-50). It is clear that Mr. Robinson's threshold for employing
16 something other than the remaining life is rather high and maybe not obtainable.

17
18 Q. DOES THIS POSITION COMPORT WITH COMMISSION PRECEDENT?

19 A. As previously noted, the Commission often has employed the recovery of a
20 reserve imbalance over periods shorter than the remaining life.

21
22 Q. HAS THE COMPANY'S DEPRECIATION EXPERT PREVIOUSLY
23 TESTIFIED IN FLORIDA?

1 A. No.

2

3 Q. DOES THIS POSITION TAKEN BY PEF ADEQUATELY ADDRESS THE
4 INTERGENERATIONAL INEQUITY THAT EXISTS FOR CURRENT
5 CUSTOMERS?

6 A. No. For example, the 20-year change in the number of residential customers on an
7 actual and forecasted basis, as set forth on page 2-4 of the Company's Ten-Year
8 Site Plan dated March 31, 2003 is 42%. (See Exhibit __ (JP-5)). While this is a
9 sizeable change in the customer base, it tells only part of the story. The 42%
10 growth is a net number and does not identify how many customers left or will
11 leave the system. Thus the change in customers corresponding to the remaining
12 life period employed by PEF for the return to customers of its prior acceleration
13 of depreciation expense, at least for the residential class, could easily be over
14 50%. I submit that the current intergenerational inequity that exists due to the
15 current excess of the depreciation reserve created by prior accelerated levels of
16 depreciation (whether intentional or not) cannot reasonably be addressed or
17 rectified by relying on a 19.25-year remaining life period.

18

19 Q. DOES RELIANCE BY SOME OTHER JURISDICTION ON REMAINING
20 LIFE TO ADDRESS RESERVE IMBALANCES DIMINISH THE NEED TO
21 FOLLOW FPSC'S LONG AND IDENTIFIABLE PRECEDENT?

22 A. No. In my opinion it would be unfair to customers to deny them the same
23 treatment afforded utilities by the FPSC when the situation was reversed.

1 Inconsistent application of concepts in the rate setting process causes uncertainty.
2 Needless uncertainty in the ratemaking process is not in the public interest and
3 can result in higher rate case expenses and other higher costs in the future.
4

5 Q. HAS MR. ROBINSON RAISED CONCERNS REGARDING A POTENTIAL
6 TURNAROUND OF THE EXCESS RESEVE?

7 A. Yes. Mr. Robinson attempts to place the comparison of the theoretical reserve to
8 the actual book reserve as something that is akin to painting “a very vague
9 picture.” He basis his position on the belief that the reserve position could change
10 “because one day, today you could have no deficiency, and tomorrow after you
11 finish the [depreciation] study, you could have a large deficiency.” (See Exhibit _
12 (JP-2), Mr. Robinson’s deposition at page 64). Mr. Robinson even went so far as
13 to present a hypothetical example where plant could increase by 50% in the year
14 after a depreciation study and the new addition would have a short remaining life.
15 By the time a new study would be performed, the reserve would turn around.
16 (See Exhibit _ (JP-2), Mr. Robinson’s deposition at page 75). It would take an
17 extreme situation to cause the excess reserve imbalance to turn around quickly.

18 Q. HOW DO YOU ADDRESS THE COMPANY’S DEPRECIATION
19 CONSULTANT’S CONCERN THAT DEVIATION FROM THE REMAINING
20 LIFE AS THE TRUE-UP PERIOD LEAVES EVERYONE SUBJECT TO A
21 REVERSAL OF THE EXCESS RESERVE POSITION SOMETIME IN THE
22 FUTURE?

1 A. Recall that, as adjusted to address inappropriate salvage factors, the reserve
2 excess is more than a billion dollars, and that if my recommendation is adopted
3 PEF will remain “over funded” by \$504 million. Consider also that PEF will
4 submit a new depreciation study within four years. Because I have purposely
5 tempered my recommendation to be conservative, under the circumstances I
6 believe there is no realistic scenario under which PEF could swing to a reserve
7 deficiency prior to the next study. Certainly, that remote prospect is more than
8 outweighed by the prejudice to current customers if the Commission were to take
9 no action to address the severe imbalance more rapidly than the remaining lives of
10 the assets. I would say there is no realistic basis or possibility that the excess
11 reserve would turnaround and become a deficiency by the time the next
12 depreciation study is completed in four years.

13

14 Even if a reversal were to occur, I do not believe it could be of a significant level,
15 for example up to the \$504 million excess currently identified in PEF’s
16 depreciation study. I believe this to be the situation given that the Company is
17 requesting a little over \$300 million of annual depreciation and the Company’s
18 proposed reduction in depreciation expenses is \$46 million, or about 13%. If one
19 assumes that the future will be as the Company proposes in this case and
20 depreciation could be off by 13% per year, then the under-recovery during the
21 next four years would be approximately \$160 million. This would represent only
22 about a third of what the current level of the reserve excess that I have
23 recommended to be left in place. Thus, Mr. Robinson’s hypothesizing of a 50%

1 increase in plant immediately after this case ends with a short remaining life that
2 might result in a conclusion that “your whole reserve comparison scenario
3 [sizeable excess reserve imbalance] would just totally change” is so far beyond
4 the realm of reality that it represents nothing more than an attempt to deny the
5 obvious. (See Exhibit _ (JP-2), Mr. Robinson’s deposition at page 75).

6
7 Q. WHAT IS YOUR SPECIFIC PROPOSAL REGARDING THE TREATMENT
8 OF THE RESERVE EXCESS?

9 A. I recommend an approach that should satisfy all concerns if my recommended
10 adjustments to mass property net salvage are adopted. Under the scenario I
11 recommend, the \$714 million plus of additional excess reserves associated with
12 my adjustments to net salvage parameters, plus the nuclear decommissioning
13 excess reserve of \$130 million, would be returned to customers over the next 4-
14 years. The \$504 million of excess reserve identified by the Company in its own
15 study can be returned to customers over the remaining life as it proposed. This
16 latter aspect provides a safety cushion for those that may believe that one is
17 necessary, while providing the most representative generation of customers
18 available the return of a significant portion of their prior overpaid depreciation
19 expense. This approach addresses the matching principle and its related
20 intergenerational inequity problem, but not to the degree that this Commission has
21 previously found appropriate in other cases. This approach also takes into
22 account the need to gauge the impact of a shorter amortization period so as to
23 protect the financial integrity of the Company. I have discussed the impact of my

1 recommended adjustment with OPC's financial and accounting witnesses, who
2 confirmed that PEF could implement my recommendation and maintain coverage
3 ratios adequate to access the capital markets on reasonable terms and maintain an
4 appropriate capital structure. Alternatively, if the Commission elects not to adopt
5 my recommended net salvage adjustments, then fairness and equity demands that
6 the \$504 million reserve excess identified by PEF plus the \$129 million excess in
7 the nuclear decommissioning fund be amortized back to customers over a 4-year
8 period. At that point, a clean slate will have been established and future
9 customers will be charged based on the then best estimate of depreciation
10 parameters.

11
12 Q. WHY DID YOU CHOOSE A 4-YEAR AMORTIZATION PERIOD?

13 A. The 4-year period is not only within the range of periods previously adopted by
14 this Commission for other cases where a reserve deficiency was present; it also
15 corrects the intergenerational situation in an effective and manageable manner.
16 Further, the 4-year period provides sufficient time for the Company to gain
17 additional experience and perform and present a new, complete and well-
18 documented depreciation study. Finally, one must always recognize that the
19 ratemaking process already disadvantages current customers in the
20 intergenerational inequity scenario. Remember, those generations of customers
21 nearer to the end of the useful life of an investment pay much less for service than
22 do customers at the beginning of the useful life. While future customers will not
23 see a difference in the actual product (i.e., a kwh of energy or a Kw of capacity), a

1 different price will be paid. Payment for electricity near the end of the useful life
2 of investment is associated with heavily depreciated investment. Recognition of
3 heavily depreciated investment results in a much smaller return on investment
4 being required. It is inappropriate to violate the strong and identifiable precedent
5 employed by this Commission in the past by penalizing current customers for the
6 benefit of future customers.

7
8 Q. WHAT IS THE IMPACT ON REVENUE REQUIREMENTS IF YOUR
9 BIFURCATED APPROACH TO THE \$1.2 BILLION RESERVE ACCESS IS
10 ADOPTED?

11 A. Allowing the Company to retain the remaining life approach associated with the
12 \$504 million of excess reserve it reflected in its filing and depreciation request
13 results in no additional impact on its requested revenue requirements one way or
14 the other. Amortizing the \$714 million excess reserve associated with my
15 recommended changes to mass property net salvage plus the \$130 million of the
16 excess in the nuclear decommissioning fund results in a \$211 million reduction in
17 depreciation expense, and a corresponding reduction of that amount in the
18 Company's overall revenue requirements. Note that the amortization would not
19 completely offset the \$300 million of depreciation expense requested by PEF.

1 SECTION V. NET SALVAGE - GENERAL

2 A. General

3 Q. WHAT PERIOD ASSOCIATED WITH ITS NET SALVAGE STUDY HAS
4 THE COMPANY CHOSEN TO ANALYZE?

5 A. The Company has analyzed a 29-year period, 1975 through 2003.
6

7 Q. ON AN OVERALL BASIS, WHAT IS THE COMPANY'S POSITION WITH
8 RESPECT TO THE NET SALVAGE ASPECT OF ITS DEPRECIATION
9 STUDY?

10 A. The Company predicts that it will incur negative net salvage of \$1.4 billion. In
11 other words, the cost to remove the plant will exceed its salvage value by that
12 amount. This means that PEF contends it must collect \$1.4 billion, or 16%, more
13 than its original investment in plant to recoup its capital investment.
14

15 Q. HAVE YOU REVIEWED ALL THE INFORMATION PRESENTED BY THE
16 COMPANY IN SUPPORT OF ITS NET SALVAGE REQUEST?

17 A. Yes. I reviewed the Company's study and its answers and responses to OPC's
18 discovery requests. In addition, OPC took the deposition of Mr. Robinson, the
19 consultant who prepared the depreciation study, during which Mr. Robinson was
20 asked to describe in detail all of the information he considered and the procedure
21 he followed in arriving at his positions.
22

1 Q. WHAT DO YOU CONCLUDE REGARDING THE ADEQUACY OF THE
2 INFORMATION TO SUPPORT PEF'S POSITION ON NET SALVAGE?

3 A. For the reasons I will develop in detail below, the information provided by the
4 Company is inadequate to support or demonstrate the appropriateness of its
5 request for an overall negative \$1.4 billion or negative 16% net salvage for plant
6 in service forecasted as of December 31, 2005. (These amounts are exclusive of
7 decommissioning activity related accounts).

8

9 Q. WHAT PROCESS DID PEF EMPLOY WHEN ESTABLISHING ITS NET
10 SALVAGE PARAMETERS?

11 A. The only indication within the depreciation study of the process employed is very
12 limited narratives along with 3 to 4 pages of historical data and limited numerical
13 analyses for each account in the filed study. This is found in Sections 4 and 8 of
14 the Company's depreciation study.

15

16 The historical data is listed both on an annual basis and on a rolling 3-year
17 average or band basis. The last numerical page for each account sets forth the 29-
18 year overall average for gross salvage, cost of removal and net salvage. Also set
19 forth on the last numerical page for each account are two forecasts, one for gross
20 salvage and the other for cost of removal. The consultant predicted end-of-life
21 gross salvage by means of a linear trend analysis. He estimated the cost of
22 removal by applying an inflation factor to current levels. Both of these tools are
23 suspect.

1

2 Q. WHY ARE THEY SUSPECT?

3 A. To begin, one must have in mind the definition of gross salvage. It is the
4 payment, if any, the Company will receive for the asset when it retires and
5 disposes of the asset. By definition, the minimum possible value for gross
6 salvage is zero. Yet, Mr. Robinson's linear trend regression frequently arrived at
7 negative gross salvage values—a result that is theoretically impossible, and that
8 should alert one to flaws in the assumptions or methodology employed.

9

10 With respect to the cost of removal, Mr. Robinson inflated current costs over time
11 by an assumed annual inflation factor of 2.75%. However, he failed, among other
12 things, to consider the implications of the mismatch that results when one requires
13 cost of removal expressed in future dollars to be collected from current customers
14 in current dollars. His methodology produced removal costs so overstated that he
15 frequently was forced to ignore or mentally “discount” the results when arriving
16 at individual recommendations. (See Exhibit _ (JP-2), Mr. Robinson deposition at
17 page 128).

18

19 Therefore, it appears that the basis for the final depreciation parameter proposals
20 lies in the narrative portion of the depreciation study. I must emphasize that I use
21 the word “appears” given the failure by the Company in the depreciation study,
22 the testimony, and the responses to interrogatories and requests to produce
23 documents to identify and present with any degree of specificity how the final

1 proposal was determined. The narrative basically alludes to “Company
2 expectation,” “the Company’s overall experience”, “anticipated level of increase
3 of retirement costs”, or inconsistent reliance on varying historical data points. In
4 other words, these statements or bases for the Company’s proposal amount to
5 little more than vague generalities that could yield basically any value the
6 depreciation analyst desires.

7
8 Q. TO WHICH ACCOUNTS ARE YOU RECOMMENDING A CHANGE DUE
9 TO YOUR NET SALVAGE ANALYSES?

10 A. As set forth on Exhibit _ (JP-6), I am recommending a change to 11 of the
11 Company’s transmission and distribution accounts. These accounts comprise
12 over 88% of PEF’s transmission and distribution plant investment as of December
13 31, 2005.

14
15 Q. WHAT ARE THE MAJOR FLAWS IN THE COMPANY’S NET SALVAGE
16 ANALYSIS FOR TRANSMISSION AND DISTRIBUTION PLANT?

17 A. The Company’s transmission and distribution related net salvage analysis is
18 fatally flawed due to numerous and significant problems. The major problems are
19 identified below:

- 20 • Linear Trend Analysis for Gross Salvage Projections – One of the
21 major mathematical exercises performed by the Company for each
22 account is a linear trend of the historical gross salvage. First, it
23 must be noted that the regression analysis of gross salvage percent

1 relationships does not recognize the materiality of the data point in
2 any given year. In other words, a \$100 retirement with a
3 corresponding \$1 gross salvage that results in a 1% level of gross
4 salvage would be given the same weight in the regression analysis
5 as a \$1 million retirement with a \$500,000 gross salvage that
6 results in a 50% gross salvage level. Notwithstanding this problem
7 with the regression analysis, Mr. Robinson should have recognized
8 the fallacy of this model, since it often produced negative values.
9 Negative values are theoretically impossible for gross salvage!
10 Unfortunately, Mr. Robinson utilized a method that produced
11 theoretically impossible negative gross salvage values in
12 forecasting his total "forecasted" net salvage values, and then
13 basically discarded the results when determining his
14 recommendation. Mr. Robinson's reliance on his gross salvage
15 model as a starting point to then discount values simply distorted
16 the entire process.

- 17 • Inflation Based Cost of Removal Forecast – Mr. Robinson relies
18 on a forecast model for cost of removal that recognizes only
19 inflation. This model is also fatally flawed since it assumes
20 inflation is the only factor to consider in determining future cost of
21 removal. Given that the historical level of cost of removal is part
22 of the starting point of this calculation, Mr. Robinson should have
23 realized that many factors other than inflation affected the

1 historical level. In fact, if Mr. Robinson's overall model had any
2 validity it would be easy to plot the historical cost of removal in
3 relation to its age of the retirement and see a constantly upward
4 sloping relationship reflecting the direct impact of inflation. In
5 Exhibit _ (JP-7), I have graphed the relationship for account 364.
6 As can be seen in this graph, as the age of the Company's actual
7 data increases, the level of cost of removal does not increase as Mr.
8 Robinson assumes. Simply put, Mr. Robinson has made an invalid
9 assumption in his model that distorts his results. This approach
10 does not produce credible results, even to the point where Mr.
11 Robinson basically must discount or ignore them.

- 12 • Heavy Discounting of Historical Gross Salvage – Mr. Robinson
13 calculates historical gross salvage averages for the database on
14 which he relies. In many instances Mr. Robinson finds the high
15 levels of historical gross salvage unacceptable. He claims that
16 such amounts can only be attributed to reimbursements for
17 relocation of investment or items returned to stores (reuse). He
18 therefore “heavily discounts” these values-- but on an inconsistent
19 basis. Mr. Robinson's analysis is not based on any investigation of
20 the underlying transactions to determine the validity of his actions.
21 Had he undertaken an investigation, he may have found that he has
22 in effect doubly discounted the impact of reimbursements and
23 items returned to stores. He did not identify the level of annual

1 retirements attributable to items returned to stores or associated
2 with reimbursements, nor did he determine the corresponding
3 values obtained for such transactions. In other words, Mr.
4 Robinson does not know whether the historical positive levels of
5 net salvage may only reflect a small level of retirement activity
6 associated with high levels of reimbursements or returns to stores,
7 or vice versa. The historical levels of gross salvage may be very
8 indicative of what can be expected in the future. Without the
9 benefit of adequate investigation, his decisions to heavily discount
10 these transactions in his selection process can very well result in a
11 double discounting for the same event.

12 • Failure to Explain Significant Differences from PEF's 2002 Study

13 The Company performed a depreciation study on plant as of 2002;
14 Mr. Robinson's study was performed on data that included only
15 one more year. Mr. Robinson has proposed significant changes for
16 many depreciation parameters without any explanation as to what
17 caused such changes. In fact, it appears Mr. Robinson was
18 unaware that a study one year prior to his analysis had been
19 performed. (See Exhibit __ (JP-2), Mr. Robinson's deposition at
20 page 29). Such failure to address Company specific data and
21 recommendations undermines the credibility of Mr. Robinson's
22 proposals. For example, in Account 364, the Company
23 recommended a negative 25% net salvage in its 2002 depreciation

1 study, the same value as the net salvage level that is built into
2 PEF's existing depreciation rates. Yet, in this proceeding Mr.
3 Robinson proposes a negative 90% net salvage for this account.
4 This swing of 65 percentage points, applied to an account
5 approaching half a billion dollars in investment, has the effect of
6 reducing the excess reserve position that the Company would
7 otherwise calculate by over \$300 million as compared to the
8 reserve associated with the existing net salvage value and that
9 contained in the 2002 study. This significant modification to the
10 Company's reserve, and in effect depreciation expense, deserves
11 detailed and significant investigation. The need for detailed
12 investigation is especially important given the fact that in 2003--
13 the one additional year of data that Mr. Robinson relied upon
14 compared to the Company's 2002 study—the data produced a
15 positive 193% net salvage for Account 364. In other words, there
16 was a dramatic increase in the percent level of positive net salvage
17 in the one additional year and Mr. Robinson dramatically reduced
18 net salvage (by increasing the negativity of the net salvage factor).
19 This is one example among several in which "judgment" appears
20 to conflict with, rather than apply, facts and logic.

- 21 • Failure to Perform Check of Reasonableness – PEF's depreciation
22 study developed by Mr. Robinson appears to be basically silent
23 regarding employing a sanity check or check of reasonableness for

1 his proposals compared to industry data. This failure to perform
2 such a check of reasonableness is contrary to Mr. Robinson's
3 stated position in testimony before another state regulatory agency,
4 and is inconsistent with normal practices. (See Exhibit _ (JP-8)).
5 For example, if Mr. Robinson had performed the sanity check or
6 check for reasonableness for his negative 90% proposal for
7 Account 364 - Distribution Poles, Towers & Fixtures, he would
8 have found that his proposal was 2 to 3 times higher (that is, more
9 negative) than the industry average. Had he performed such a
10 check he might have decided to investigate further and learn the
11 Company's 2002 study had proposed only a negative 25% factor.
12 Such additional information, coupled with the 2003 positive
13 values, may have prevented him from making such a dramatically
14 abrupt and inappropriate proposal.

- 15 • Anomalous Data – The Company's historical data contains
16 atypical or unusual values. While it appears from the statements
17 made during Mr. Robinson's deposition that he was concerned
18 regarding some of the values, he did not adequately investigate or
19 receive information from the Company that would explain what
20 caused the data he has admitted are anomalous or "bogus". (See
21 Exhibit _ (JP-2), Mr. Robinson's deposition at pages 141 and 142
22 for examples). Unfortunately, Mr. Robinson included such data in
23 his analysis, which in part helps explain why modifications are

1 required in order to present more appropriate values for ratemaking
2 purposes.

- 3 • Inconsistent Approach – While Mr. Robinson claimed during his
4 deposition that he had performed the same sequence of events in
5 developing his net salvage proposals, he failed to note that within
6 the sequence he inconsistently picks and chooses values. For
7 example, in Account 353 – Transmission Station Equipment, Mr.
8 Robinson relied, in part, on his review of historical data, zeroing in
9 on the fact that the positive net salvage declined and became
10 “negative during more recent years.” (See Exhibit _ (JP-3), page
11 4-26 of the 2003 depreciation study). This is in part why he
12 ignored the historical 32% positive net salvage and proposed a zero
13 level. Mr. Robinson relied on the two negative net salvage values
14 that occurred in two recent years out of 29 years of historical data.
15 He relied on these data points even though he agreed the two
16 negative values were potentially anomalous and reflected very
17 small negative values that were subsequently followed by a
18 significant positive value in 2003. (See Exhibit _ (JP-2), Mr.
19 Robinson’s deposition at page 106). The very small values in 2001
20 and 2002 are driven by the \$7,211.70 and \$0.00 gross salvage
21 amounts, respectively, compared to the \$694,682.13 annual
22 average over the database without those two years. (See Exhibit _
23 (JP-3), pages 8-70, 8-71, and 8-73 of the 2003 depreciation study).

1 This approach of zeroing in on one or two years of data within his
2 database is contrary to his statement in his deposition. There he
3 stated that he would “look what those [historical data] produced
4 overall and make my assessment from there, rather than trying to
5 pinpoint one or two items on the page, knowing that there’s a
6 whole range of data there.” (Emphasis added). (See Mr.
7 Robinson’s deposition transcript at page 120 at Exhibit _ (JP-2)).
8 In effect, what Mr. Robinson has presented is a consistent process
9 that establishes a wide range of potential values without any
10 specifics as to why he chose his ultimate proposal. This process of
11 not documenting the Company’s basis, allows for an arbitrary
12 discounting of data. When Mr. Robinson was asked in his
13 depositions what basis he used to discount values, he states he had
14 no specific basis. (See Exhibit _ (JP-2), Mr. Robinson’s deposition
15 at page 128). He further states he had no consistent or identifiable
16 basis that he applied to each account, thus allowing him to choose
17 and be inconsistent between accounts. (See Exhibit _ (JP-2), Mr.
18 Robinson’s deposition at page 128). While a depreciation analyst
19 must have some degree of flexibility in the establishment of
20 parameters, the different approaches and inconsistent reliance on
21 the data within a process should be reasonably explained. Mr.
22 Robinson’s study is devoid of such meaningful explanation.

- 1 • Accounting for Replacement Activity – The Company has not
2 identified, nor substantiated, those dollars that have been allocated
3 between the cost of a new replacement addition and the cost or
4 removal associated with the retired plant. The Company’s
5 apparent arbitrary and unsubstantiated level of allocation cannot be
6 allowed to buttress an increase in cost of removal absent a clear
7 and adequate demonstration as to the appropriate and necessary
8 process assumptions, and consideration employed by the
9 Company.

10 These major problems, along with others, permeate Mr. Robinson’s
11 selection process.

12 B. Account Specific Adjustments

13 a. Account 353.1 – Transmission Station Equipment
14

15 Q. WHAT HAS THE COMPANY PROPOSED FOR NET SALVAGE IN
16 ACCOUNT 353.1 – TRANSMISSION STATION EQUIPMENT?

17 A. The Company has proposed a 0% level of net salvage for its investment in
18 Account 353.1. This is a decrease of 10 percentage points from the existing
19 +10% net salvage (that is, a higher costs to customers). The Company’s basis for
20 its proposal is its claim that net salvage has “varied widely over the years with
21 positive salvage declining and even becoming negative during more recent years.”
22 The Company further states that it estimates the future net salvage will be a

1 negative 50% “based upon the recent experience and anticipated increased cost of
2 removal in the future.” (See Exhibit _ (JP-3), the 2003 depreciation study at page
3 4-26).

4
5 Q. DO YOU AGREE WITH THE COMPANY’S CONCLUSION?

6 A. No. The Company’s basis for a 0% net salvage is misleading. First, the
7 referenced recent negative values occurred only twice in the past 29 years, and
8 these occurrences coincide with very small dollar amounts. Next, none of the 3-
9 year bands presented by PEF were negative, and the lowest 3-year band was still a
10 positive 5%. There was not another single band that was lower than a positive
11 11%. Depreciation analysts roll data into multi-year bands for the very reason
12 that single year values can be misleading and that some level of materiality must
13 be obtained. Moreover, the most recent year’s activity yielded a positive 24% net
14 salvage. The Company’s statement that its future net salvage forecast “is
15 approximately negative fifty (50) percent” is an excellent example of just how
16 little credibility can be assigned to the Company’s forecasting process. The
17 forecast is comprised of gross salvage and cost of removal components. The
18 gross salvage component was based on a linear trend and produced a negative
19 21.41%. As I stated earlier in my general comments on Mr. Robinson’s tools and
20 methodology, this represents an impossible result, as gross salvage by definition
21 can only be zero or more. Unfortunately, Mr. Robinson was not deterred by the
22 impossible value, since he employed it in his overall future negative 50% net
23 salvage forecast: (-21.41% impossible gross salvage - 28.29% cost of removal = -

1 49.70% net salvage factor). (See Exhibit _ (JP-3), page 8-73 of the 2003
2 depreciation study).

3
4 Mr. Robinson's position on the gross salvage estimate changed during his
5 deposition. In his deposition, Mr. Robinson finally recognized the negative 20%
6 gross salvage as an impossible value and stated that "would have been zero." He
7 also stated he "really highly discounted the [historical] gross salvage" and came
8 up to a 10% value from the historical 41% level. (See Mr. Robinson's deposition
9 transcript at page 101 at Exhibit _ (JP-2)). However, his answer is refuted by the
10 mathematical precision of his derivation of the net salvage factor for this account.

11
12 Mr. Robinson also admitted in his deposition that the two recent years where
13 negative net salvage occurred, and were part of his basis for a 0% proposal,
14 reflected "very low" levels of gross salvage. He relied on these "very low" gross
15 salvage values even though he admitted those values --compared to other gross
16 salvage values in his database-- were "anomalous". (See Exhibit _ (JP-2), Mr.
17 Robinson's deposition at pages 106 and 107). Thus, only from Mr. Robinson's
18 deposition can one begin to narrow down the possible basis for his gross salvage
19 estimate. It appears that he ignored the trend analysis he provided in the
20 depreciation study and also "highly discounted" the historical gross salvage.

21
22 Mr. Robinson's basis for his proposal of a 10% cost of removal is equally unclear.
23 His study calculates a 28.29% future cost of removal, not 10%. The inflation-

1 based forecast has previously been discussed and shown to be fatally flawed. Mr.
2 Robinson appears to recognize the flaw by eliminating approximately 65% of the
3 calculated value in arriving at his final proposal ($[28.29\% - 10\%] / 28.29\%$). Mr.
4 Robinson's reliance on historical data may have also been skewed to an
5 abnormally high level due to historical costs associated with the removal of
6 transformers contaminated with PCBs—a cost that PEF no longer incurs. While
7 Mr. Robinson inquired about PCBs remaining in the system, he admitted in his
8 deposition that, “there could have been some more PCBs during the 1985 to 1995
9 time frame.” (See Exhibit _ (JP-2), Mr. Robinson's deposition at page 105). It is
10 during this time frame the Company incurred its highest percentage levels of cost
11 of removal. Unfortunately, it does not appear that he took this fact into account to
12 also “discount” historical cost of removal as he did gross salvage.

13
14 Q. WHAT WAS THE COMPANY'S RECOMMENDATION FOR THIS
15 ACCOUNT IN ITS 2002 DEPRECIATION STUDY?

16 A. PEF recommended a 10% positive net salvage only one year earlier in the PEF's
17 2002 depreciation study. (See Exhibit _ (JP-9), 2002 depreciation study at page
18 PEF-RC-017675). The one-year of additional activity produced a positive 24%
19 net salvage for that year. The Company has not demonstrated why a 10-
20 percentage point reduction in net salvage is warranted after only one-year when
21 that one additional year of experience and data indicates a higher, not lower, gross
22 salvage.

23

1 Q. WHAT NET SALVAGE LEVEL DO YOU RECOMMEND FOR THIS
2 ACCOUNT?

3 A. I am recommending a positive 10% net salvage as a reasonable level. I base my
4 recommendation on (1) the fact that this Company previously analyzed the data
5 through 2002 and recommended a positive 10% net salvage, (2) the additional
6 data for 2003 was a positive 24% net salvage indicating an even greater positive
7 value may be appropriate, (3) not a single 3-year rolling band analysis yielded less
8 than a 5% net salvage and in fact all but one yielded greater than a positive 11%
9 net salvage value, (4) the only historical negative net salvage values occurred in 2
10 years where the data is “anomalous”, and (5) a review of industry data confirms
11 that a small positive net salvage is appropriate. While a more positive value may
12 be warranted, the retention of the existing 10% value, which was reaffirmed by
13 the Company in its 2002 study, is reasonable at this time.

14

15 Q. WHAT IS THE IMPACT OF YOUR RECOMMENDATIONS?

16 A. My recommendation results in a \$1,035,669 reduction to depreciation expense or
17 a \$41,426,841 increase in the excess reserve imbalance based on plant as of
18 December 31, 2005.

19

20 b. Account 355 – Transmission Poles & Fixtures

21

1 Q. WHAT HAS THE COMPANY PROPOSED FOR ACCOUNT 355 –
2 TRANSMISSION POLES & FIXTURES?

3 A. The Company has proposed a negative 25% net salvage. This is a 5-percentage
4 point reduction—(that is, less negative)-- from the current negative 30% net
5 salvage.
6

7 Q. WHAT IS THE COMPANY’S BASIS FOR ITS PROPOSED NET SALVAGE?

8 A. The Company states that this account has encountered a wide range of net salvage
9 (positive 150% to a negative 125%). According to PEF, the highest (positive)
10 levels are due to plant being returned to stores. The Company incurred high
11 levels of negative net salvage in recent years and anticipates future net salvage to
12 be negative 66% based on its linear trend and inflation analyses. Based on some
13 unidentified blending of historical analysis results and consideration of its
14 anticipated future analysis, PEF proposes a negative 25% as a reasonable level for
15 this account. (See Exhibit _ (JP-3), 2003 depreciation study at pages 4-29 and 4-
16 30). Mr. Robinson also states in his deposition that he performed “the same sort
17 of sequence, nothing different about the sequence that we would go through” in
18 the determination of his net salvage parameters for all accounts. (See Mr.
19 Robinson’s deposition transcript at page 112 at Exhibit _ (JP-2)).
20

21 Q. DO YOU AGREE WITH THE COMPANY’S RECOMMENDATION?

22 A. No. As Mr. Robinson noted in his deposition, this is again an account where he
23 elected to “really discount” or employ “conservative moderation” to ignore the

1 results of his inflation based forecasts. (See Mr. Robinson's deposition transcript
2 at page 114 at Exhibit _ (JP-2)). In his deposition, he also admits to what "would
3 appear to [an] anomalous" gross salvage value that was materially lower than all
4 28 other years of data, but elected not to investigate it any further. (See Mr.
5 Robinson's deposition transcript at page 120 at Exhibit _ (JP-2)). It may have
6 made little difference in his proposal given his inappropriate decisions to heavily
7 or "really discount" gross salvage. Moreover, for some unexplained reason, Mr.
8 Robinson, stated in his deposition that he elected to employ a philosophy of
9 "conservative moderation." (See Mr. Robinson's deposition transcript at page
10 114 at Exhibit _ (JP-2)). His philosophy caused him to discount his forecasted
11 result for this account from a negative 65.58% to a negative 25%, a 62% discount.
12 It must be noted that for transmission Account 353.1 – Station Equipment, Mr.
13 Robinson chose to discount his forecasted net salvage value by 100%. The
14 difference is unexplained.

15
16 Mr. Robinson's proposal also fails to reasonably recognize his own 3-year rolling
17 band standard approach. Only 1 of the past five 3-year rolling bands resulted in a
18 negative value, and that value was a negative 16%, much lower (less negative)
19 than his proposed negative 25%. It should also be noted that only two of the 27 3-
20 year rolling bands produced values more negative than the proposed value.

21
22 As far as future expectations, the depreciation study remains silent, as do Mr.
23 Robinson's notes. The depreciation study states that "the historical analysis

1 results and consideration of the forecasted analyses” was the basis for the
2 proposal. As noted above, historical values do not justify the proposal and Mr.
3 Robinson’s discounting of his flawed forecast analysis is meaningless.
4

5 Q. WHAT NET SALVAGE VALUE DO YOU RECOMMEND?

6 A. I recommend a negative 15% for this account. I base my recommendation on (1)
7 a negative net salvage value appears only once in the last 5 3-year rolling bands,
8 (2) only 2 of the historical 3-year rolling bands had values more negative than
9 16%, (3) the value falls well within the industry reasonable range, (4) the
10 Company has consistently experienced significant levels of gross salvage in all
11 years of its database except for the one year that Mr. Robinson admits may be
12 anomalous, and (5) the expectation that the Company will continue to experience
13 some level of reuse or reimbursements in its annual retirements.
14

15 Q. WHAT IS THE IMPACT OF YOUR RECOMMENDATION?

16 A. The impact of my recommendation is a \$916,183 reduction to depreciation
17 expense, or a \$28,630,770 increase in the excess reserve imbalance based on plant
18 as of December 31, 2005.

19 c. Account 356 – Transmission Conductors & Devices
20

21 Q. WHAT HAS THE COMPANY PROPOSED FOR ACCOUNT 356 –
22 TRANSMISSION CONDUCTORS & DEVICES FOR NET SALVAGE?

1 A. The Company has proposed a negative 30% net salvage. This is a 10-percentage
2 point increase (that is, increase in negativity, meaning an increase in costs to be
3 collected from customers) in negative net salvage from the existing level of a
4 negative 20%.

5
6 Q. WHAT IS THE COMPANY'S BASIS FOR ITS PROPOSED NET SALVAGE?

7 A. PEF's study states that even though history shows a positive 35% net salvage, this
8 account has varied widely from a positive 255% to a negative 57%. The
9 Company claims that recent positive gross salvage is due to reuse of poles. PEF
10 has estimated that future net salvage will be approximately a negative 57% net
11 salvage. The Company further notes that it has experienced negative net salvage
12 in recent years. The Company also notes that its forecast analysis anticipates
13 negative net salvage, which reinforces its "expectation" of more negative net
14 salvage. Finally, the Company states that it based its proposal on "historical
15 experience and anticipated future net salvage." (See Exhibit __ (JP-3), the 2003
16 depreciation study at pages 4-30 and 4-31).

17

18 Q. DO YOU AGREE WITH THE COMPANY'S PROPOSED VALUE?

19 A. No. PEF's negative 30% net salvage is based on an unsubstantiated elimination
20 of most of the historical gross salvage as being unrepresentative. Positive gross
21 salvage (that is, value greater than zero) has been notable in all years of the
22 database. While Mr. Robinson recognized in his deposition that items returned to
23 stores can produce gross salvage values "greater than what you paid for it", he

1 failed to investigate the level of return to stores or reimbursements that will
2 continue to occur in the future. (See Mr. Robinson's deposition transcript at
3 pages 123 and 124 at Exhibit _ (JP-2)). Without the benefit of the level of reuse
4 and reimbursements, and the corresponding gross salvage, it is inappropriate to
5 simply eliminate significant levels of gross salvage that have occurred annually
6 throughout the database. Mr. Robinson's decision to again ignore his gross
7 salvage linear trend and discount the historical gross salvage experience by 87%
8 without investigation is not credible, especially given the depreciation study's
9 reference to "historical experience" as part of its basis. Further from the
10 standpoint of "historical experience," it must be noted that out of the 27 bands,
11 only one of the 3-year bands exhibited a negative level greater than a negative
12 18% net salvage. (See Exhibit _ (JP-3), 2003 depreciation study at page 8-72).

13
14 Another significant consideration is that in the Company's 2002 depreciation
15 study, it concluded a negative 15% net salvage would be appropriate. (See
16 Exhibit _ (JP-9), 2002 depreciation study at page PEF-RC-017677). It is hard to
17 justify a proposed negative net salvage that is double (that is, twice as negative)
18 the 2002 study amount based on 1-year of additional data. Moreover, if the
19 doubling of the negative net salvage is based on the negative value that was
20 booked in 2003, then Mr. Robinson would have violated his own standard of not
21 relying on one or two years of data compared to his entire database. In addition, it
22 must be noted that the 2003 negative salvage experience by the Company
23 corresponds to one of the lowest levels of retirement activity in the past 29 years.

1 The Company reported that it retired only \$286,972 of plant in 2003, while the
2 average retirement level over the prior 28 years was \$981,059. (See Exhibit _
3 (JP-3), 2003 depreciation study pages 8-85, 8-86, and 8-88). It is also
4 unexplained why Mr. Robinson decided to discount the forecasted results for this
5 account by only 47% compared to the 100% discount level for account 353.1 and
6 the 62% level for account 355.

7
8 Q. WHAT NET SALVAGE LEVEL ARE YOU RECOMMENDING?

9 A. I recommend a negative 10% net salvage. My recommendation is based on (1)
10 recognition that while the historical database is significantly positive for all but a
11 few years, the composition of the historical data is not known, (2) industry
12 averages indicate nothing as low as a zero (0) value is appropriate, but that values
13 up to a negative 25% are within the reasonable range, (3) the Company's 2002
14 study recommended a negative 15% or a less negative value than the existing
15 level, and (4) the Company did not identify any factors, other than the previously
16 debunked concept of inflation, that would support anything other than a
17 movement toward the relationship exhibited by history.

18
19 Q. WHAT IS THE IMPACT OF YOUR RECOMMENDATION?

20 A. The impact of my recommendation is a \$1,317,991 reduction to depreciation
21 expense, or a \$43,933,098 increase in the excess reserve imbalance based on plant
22 as of December 31, 2005.

23

1

2 d. Account 362 – Distribution Station Equipment

3

4 Q. WHAT HAS THE COMPANY PROPOSED FOR ACCOUNT 362 –
5 DISTRIBUTION STATION EQUIPMENT FOR NET SALVAGE?

6 A. PEF has proposed a negative 15%. This is a significant change, from the
7 Company's existing net salvage of a positive 15%.

8

9 Q. WHAT IS THE COMPANY'S BASIS FOR ITS PROPOSED NET SALVAGE
10 PERCENTAGE?

11 A. In its study, the Company recognizes that it historically experienced
12 approximately a positive 25% net salvage. However, Mr. Robinson discounts this
13 data due in part to his belief that it principally reflects relocations and reuses.
14 PEF does not expect the relocation and reuses to continue at the same level in the
15 future. The Company further recognizes that positive net salvage has been
16 declining in the recent years and started turning negative. Finally, the Company
17 relies on its forecasted net salvage at a negative 30%. Giving "consideration" to
18 the recent experience and its forecast, but not stating specifically how, the
19 Company proposes a negative 15%. (See Exhibit _ (JP-3), 2003 depreciation
20 study at pages 4-35 and 4-36).

21

22 Q. DO YOU AGREE WITH THE COMPANY'S PROPOSED VALUE?

1 A. No, I do not agree with the Company's proposal. The Company has not provided
2 any reasonable or credible basis to support its proposed negative 15%; especially
3 given it is proposing a full 30-percentage point swing in net salvage from the
4 existing rate. Given that the balance for this account is \$370 million, a 30-
5 percentage point swing represents a \$111 million movement in the balance of the
6 reserve.

7
8 Review of the historical data demonstrates that there has not been a single year of
9 activity during the past 29 years in which the net salvage exceeded (that is, was
10 less in value than) a negative 13%. Out of the entire period, only 3 years had any
11 negative value. The net salvage for the past 5 and 10-year periods is positive 12%
12 and a positive 20%, respectively. The overall value is a positive 25%. Moreover,
13 not a single valid year in the database had a cost of removal as high as the
14 inflation-based forecasts of the Company.

15
16 The Company's 2002 depreciation study recommended the continued use of a
17 positive gross salvage due to return to stores associated with growth in the system.
18 The system is still growing. (See Exhibit __ (JP-9), 2002 depreciation study at
19 page PEF-RC-017682). While PEF did experience a negative value in a few
20 years, it must be noted that those years corresponded to the lowest levels of gross
21 salvage in history. Moreover, had Mr. Robinson reviewed industry averages as a
22 check for reasonableness, he most likely would not have proposed such a negative
23 value.

1 Q. WHAT RATE ARE YOU RECOMMENDING?

2 A. I recommend a zero (0) % level of net salvage. My recommendation is based on
3 (1) the strong historical activity of the Company indicating that a positive value
4 would be appropriate, (2) the fact that historical data for this account likely
5 understates net salvage due to the probable inclusion of costs associated with
6 disposal of PCBs, (3) the Company's recommendation of a 5% positive value in
7 its 2002 depreciation study, and (4) industry confirmation of net salvage value of
8 approximately zero as being reasonable.

9

10 Q. WHAT IS THE IMPACT OF YOUR RECOMMENDATION?

11 A. The impact of my recommendation is a \$1,665,887 reduction to depreciation
12 expense or a \$55,529,642 increase in the excess reserve imbalance based on plant
13 as of December 31, 2005.

14

15 e. Account 364 – Distribution Poles, Tower & Fixtures

16

17 Q. WHAT HAS THE COMPANY PROPOSED FOR ACCOUNT 364 –
18 DISTRIBUTION POLES, TOWER, AND FIXTURES FOR NET SALVAGE?

19 A. The Company has proposed a negative 90% for Account 364, Distribution Poles,
20 Tower, and Fixtures. This is a significant increase (that is, greater negativity and
21 greater amount to collect from customers) in net salvage from the existing
22 negative 25% for such a large account.

1 Q. WHAT IS THE COMPANY'S BASIS FOR ITS PROPOSED NET SALVAGE
2 PERCENTAGE?

3 A. Historically the Company has incurred a negative 6% net salvage for this account.
4 However, in its study Mr. Robinson identified that the negative net salvage has
5 been escalating in more recent years, with several recent 3-year bands producing
6 results far in excess of a negative 100%. Based on this experience and experience
7 of its affiliates, the Company believes a dramatic change to a negative 90% net
8 salvage is now representative of this account. (See Exhibit _ (JP-3), 2003
9 depreciation study at pages 4-36 and 4-37).

10

11 Q. DO YOU AGREE WITH THE COMPANY'S PROPOSED VALUE?

12 A. No. The Company has not justified a negative 90% for this account. The
13 information presented by the Company does not justify a 65 percentage point
14 swing in net salvage from the existing level of a negative 25%, which,
15 incidentally, was also the value that PEF deemed appropriate in PEF's 2002
16 depreciation study. (See Exhibit _ (JP-9), 2002 depreciation study at page PEF-
17 RC-17682). Reviewing the Company's data for the past ten years yields that
18 PEF's historical experience exceeded a negative 90% in only two years during
19 this period. This is important, because Mr. Robinson not only relied on this time
20 period for his proposal but also recognized that the values for 2001 (one of the
21 two years in which PEF recorded net salvage more negative than -90%) were
22 "bogus." (See Exhibit _ (JP-2), Mr. Robinson's deposition at page 141).
23 Moreover, those two years (2001 and 2002) correspond to the two lowest levels of

1 retirement activity during the entire 29-year database. Those two years
2 experienced retirements of \$501,139 and \$194,928, respectively, while the
3 average for the remaining periods was \$1,922,196. (See Exhibit _ (JP-3), pages
4 8-109 and 8-112 of the 2003 depreciation study). In his deposition, Mr. Robinson
5 attempted to address his inconsistent discounting of “bogus” gross salvage and
6 cost of removal values for the 2001 data. There he stated his belief that “even if
7 you take that [year 2001 bogus value] out, you’re still talking relatively high
8 numbers.” He was not sure if he actually did that calculation, but if he did, it was
9 done “mentally.” (See Mr. Robinson’s deposition transcript at pages 142 and 143
10 at Exhibit _ of (JP-2)). In fact, had Mr. Robinson performed the actual
11 calculation for the most recent 10 years of his database minus the “bogus” 2001
12 values, the resulting “relative high number” would have yielded only a negative
13 36% net salvage. This is a far cry from the negative 90% Mr. Robinson
14 apparently believed would result from his “mental” approach.

15
16 As I mentioned earlier, the 2002 Company depreciation study also recommended
17 a negative 25% net salvage, the same as the existing level. Given this situation,
18 one would assume that the data for the additional year 2003 must be the driving
19 force for Mr. Robinson’s proposed change from that based on historical
20 experience. However, the net salvage for this account in 2003 was a positive
21 193%! The actual data contradicts the basis stated by Mr. Robinson in his
22 deposition. (See Mr. Robinson’s deposition transcript at pages 141 and 142 at

1 Exhibit _ of (JP-2)). There, when faced with his inconsistent discounting
2 approach he stated:

3 “You look at what the average is, you look at what the number is, and then
4 you look at the data and say, ‘Wait a second. For the last decade we’ve
5 been seeing this kind of experience, so isn’t it rational to believe that in
6 the future that’s going to continue?’” The most recent 10-year data, minus
7 the “bogus” values, and the fact that all but one of the remaining years did
8 not exceed his proposed negative 90% proposal clearly demonstrate the
9 excessive level of his proposal.

10 Yet another inconsistent action by Mr. Robinson is his failure to apply the concept
11 of gradualism to his proposal for this account. When asked in his deposition
12 about applying the concept of gradualism in view of the magnitude of his
13 proposed change, his response was while “anything is possible,” that “isn’t my
14 recommendation.” He further stated that even given the magnitude of swing
15 caused by his proposal he would not temper his position “unless there was some
16 specific information” that was applicable “to all the assets” to indicate otherwise.
17 (See Mr. Robinson’s deposition transcript at page 138 through 140 at Exhibit _
18 (JP-2)). When making that statement, Mr. Robinson apparently forgot the
19 response he developed to Citizens Interrogatory 174. There, when discussing
20 account 362 (for which his analysis forecasted a negative 30%), he proposed a
21 negative 15% since “conservatism suggests a more gradual movement in that
22 direction.” (Emphasis added). (See Exhibit _ (JP-10)).
23

1 Q. WHAT DO YOU RECOMMEND?

2 A. I am recommending a negative 35% net salvage as a reasonable value for this
3 account. This is a 10-percentage point increase (greater negativity) to the existing
4 net salvage. This recommendation looks beyond the impact of the 619% gross
5 salvage and 1,091% cost of removal values recorded in 2001, which Mr.
6 Robinson agrees are “bogus”. The recommendation is similar not only to the
7 negative 25% existing value, but also similar to the same value recommended by
8 PEF in its 2002 depreciation study. Unlike Mr. Robinson’s proposal, my
9 recommendation is right in line with industry averages. Mr. Robinson’s dramatic
10 change would place the Company at the upper end of the industry values for
11 negative net salvage. Further, my recommendation does not suffer from all of the
12 variance problems I identified in the General section of my net salvage related
13 testimony.

14

15 Q. WHAT IS THE IMPACT OF YOUR RECOMMENDATION?

16 A. Relative to PEF’s study and proposal, the impact of my recommendation is a
17 \$15,070,658 reduction to depreciation expense, or a \$262,305,794 increase in the
18 excess reserve imbalance based on plant as of December 31, 2005.

19

20 f. Account 365 – Distribution Overhead Conductors & Devices

21

1 Q. WHAT HAS THE COMPANY PROPOSED FOR ACCOUNT 365 –
2 DISTRIBUTION OVERHEAD CONDUCTORS AND DEVICES?

3 A. The Company has proposed a negative 25% net salvage for this account. This is a
4 decrease (reduction in negativity, reduction to the amount to be collected) in
5 negative net salvage from the existing negative 35% level. This value also
6 corresponds to the Company's 2002 depreciation study recommendation. (See
7 Exhibit _ (JP-9), 2002 depreciation study at page PEF-RC-017683).

8
9 Q. WHAT IS THE COMPANY'S BASIS FOR ITS PROPOSED NET SALVAGE
10 PERCENTAGE?

11 A. Historically, the Company's data has averaged a positive 4% net salvage.
12 However, based on its consultant's inflation model for cost of removal and his
13 linear trend model for gross salvage, the Company forecasts net salvage at a
14 negative 232%. Reviewing the 3-year rolling band analysis the consultant
15 identified a historical range from a positive 90% to a negative 323%. Based on
16 "the Company's overall experience and considerations of the range of three (3)
17 year rolling band analysis" it estimated a negative 25% net salvage. (See Exhibit
18 _ (JP-3), 2003 depreciation study at pages 4-37 and 4-38).

19
20 Q. DO YOU AGREE WITH THE COMPANY'S PROPOSED VALUE?

21 A. No. The Company has presented no clear basis for a negative 25% for this
22 account. The trend for gross salvage is noticeably downward, but so is cost of
23 removal. Only 2 of the 3-year rolling band analysis had a net salvage level during

1 the past 10 years equal to or in excess of a negative 25%. However, those 2 bands
2 correspond to the two oldest bands (1994-1996 and 1995-1997). Turning to the
3 annual values, only 3 years in the past 10 had negative values more negative than
4 a negative 12% and they were the oldest years (1994-1996). Net salvage for the
5 past five (5) and 10-year periods resulted in a positive 4% and a positive 8%,
6 respectively.

7
8 The Company's linear trend analysis again resulted in a theoretically impossible
9 value, but that did not stop the Company from relying on it to establish its overall
10 net salvage forecast. The depreciation study sets forth a negative 43.33% gross
11 salvage and a 188.33% cost of removal to establish a forecasted net salvage of a
12 negative 231.66%. (See Exhibit _ (JP-3), 2003 depreciation study at page 8-116).
13 The consultant's inflation based model again produced results that even Mr.
14 Robinson basically ignored or heavily discounted (188% indication, reduced by
15 the analyst to 40%). Thus, the Company's claimed bases of "overall experience",
16 which was a positive 4%, or "consideration of" the 3-year rolling band analyses,
17 which were basically positive or under 6% negative levels for the six most recent
18 3-year bands, do not support and in fact contradict the Company's proposal. The
19 Company's claimed bases strongly support a less negative value, especially given
20 that the overall database was a positive 4%.

21
22 Q. WHAT ARE YOU RECOMMENDING?

1 A. I am recommending a negative 15%. My recommendation is based on a review
2 of the previously discussed historical data. I did not rely on the gross salvage
3 linear trend (as it again produced theoretically impossible results) or the inflation
4 based cost of removal forecasts that Mr. Robinson developed. While I also gave
5 consideration to the Company's 2002 depreciation study recommendation, I
6 recognized that the trend for lower cost of removal levels continues into 2003
7 (only a negative 2%). Finally, while the Company's proposal is not outside the
8 reasonable range from an industry standpoint, my recommended negative 15% is
9 more representative of the industry average.

10
11 Q. WHAT IS THE IMPACT OF YOUR RECOMMENDATION?

12 A. My recommendation results in a \$2,159,190 reduction to depreciation expense or
13 a \$49,072,536 increase in the excess reserve imbalance based on plant as of
14 December 31, 2005.

15
16 g. Account 367 – Distribution Underground Conductors & Devices

17
18 Q. WHAT HAS THE COMPANY PROPOSED FOR ACCOUNT 367 –
19 DISTRIBUTION UNDERGROUND CONDUCTORS AND DEVICES?

20 A. The Company has proposed a negative 15% net salvage. This is a decrease (that
21 is, increase in negativity and an increase in the amount to be recovered from
22 customers through depreciation rates) from the existing net salvage of zero (0)

1 percent and also from the Company's 2002 depreciation study, which also yielded
2 a zero (0) percent factor for this account.

3
4 Q. WHAT IS THE COMPANY'S BASIS FOR ITS PROPOSED NET SALVAGE
5 PERCENTAGE?

6 A. Historically, the Company has incurred a negative 8% for this account. However,
7 based on inflation model and linear trend analyses within the depreciation study it
8 forecasted a negative 291% net salvage. The Company stated in its depreciation
9 study that it based its proposal on "experience and expectations." (See Exhibit _
10 (JP-3), 2003 depreciation study at pages 4-39 and 4-40).

11
12 Q. DO YOU AGREE WITH THE COMPANY'S PROPOSED VALUE?

13 A. No. The considerations to which the depreciation study points do not support this
14 negative 15% proposal. The Company's 2002 depreciation study recommended a
15 zero (0) percent net salvage. In 2003, the Company experienced a positive 11%
16 net salvage for this account. The 2002 depreciation study also noted that,
17 "abandonment in place is the preferred method of retirement." (See Exhibit _ (JP-
18 9), 2002 depreciation study at page PEF-RC-017684). Because "abandonment in
19 place" means literally what it says, the cost of removal should diminish and
20 should result in lower levels of negative net salvage. Industry data also yields
21 average levels of a negative 1% to a negative 11%, depending on the measuring
22 index. This is consistent with an expectation of abandonment in place as the
23 primary means of disposal. Moreover, the linear trend analysis within the

1 depreciation study again resulted in theoretically impossible values and its
2 inflation-based cost of removal model was so far off from reality that even Mr.
3 Robinson discounted its results by more than 90%.

4
5 Q. WHAT RATE ARE YOU RECOMMENDING?

6 A. I am recommending a negative 5% net salvage as a reasonable level for this
7 account. My recommendation is heavily based on the fact that the Company
8 plans on abandoning plant in service as its preferred retirement method.
9 Abandonment of retirements rather than removal of plant should reduce the
10 overall net salvage to something close to zero (0). This is apparently confirmed
11 by the Company by its recommended zero (0) level of net salvage in its 2002
12 depreciation study. Moreover, even Mr. Robinson stated in his deposition that he
13 gave abandonment "consideration" when discounting the historical levels of cost
14 of removal. (See Mr. Robinson's deposition transcript at page 152 at Exhibit _
15 (JP-2)). Industry average values ranged from zero (0) to about a negative 11%.
16 Therefore, a negative 5% net salvage value appears to be very reasonable.

17
18 Q. WHAT IS THE IMPACT OF YOUR RECOMMENDATION?

19 A. My recommendation results in a \$1,844,786 reduction to depreciation expense or
20 a \$44,994,837 increase in the excess reserve imbalance based on plant as of
21 December 31, 2005.

1 h. Account 368 – Distribution Line Transformers

2
3 Q. WHAT HAS THE COMPANY PROPOSED FOR ACCOUNT 368 –
4 DISTRIBUTION LINE TRANSFORMERS FOR NET SALVAGE?

5 A. The Company has proposed a negative 10% net salvage for this account. This is a
6 reduction (that is, increase in the amount of expense to be recovered) of 25
7 percentage points from its existing level of a positive 15%.

8
9 Q. WHAT IS THE COMPANY'S BASIS FOR ITS PROPOSED NET SALVAGE
10 PERCENTAGE?

11 A. Historically, the Company has routinely incurred a negative net salvage for this
12 account, with a negative 7% average for the entire database. In addition, the
13 Company relied on its inflation and linear trend models that produced a negative
14 29.6% value. (See Exhibit _ (JP-3), 2003 depreciation study at page 4-41).

15
16 Q. DO YOU AGREE WITH THE COMPANY'S PROPOSED VALUE?

17 A. No. There has been no clear basis for a negative 10% presented or demonstrated
18 by the Company. The trend in the most recent data is to a zero (0) level net
19 salvage. The Company's 3-year rolling band analysis also trends to a zero (0)
20 value. While the overall average for this account is a negative 7%, it is probably
21 skewed due to the high disposal costs associated with PCB contaminated
22 transformers in the past. Industry averages yield a level between a 0% to a
23 negative 10%.

1 Q. WHAT ARE YOU RECOMMENDING?

2 A. I believe a more reasonable value of a negative 5% net salvage should be applied
3 to this account. The more recent historical data strongly implies a zero (0) to
4 negative 5% value. The older and overall historical data is most likely skewed to
5 the negative side due to the disposal costs associated with PCB contaminated
6 transformers. Given that industry averages also would fully support a negative
7 5% value, the most appropriate conclusion is a negative 5% net salvage for this
8 account.

9

10 Q. WHAT IS THE IMPACT OF YOUR RECOMMENDATION?

11 A. My recommendation results in a \$1,380,432 reduction to depreciation expense or
12 a \$20,915,662 increase in the theoretical reserve excess based on plant as of
13 December 31, 2005.

14 i. Account 369.1 – Distribution Services

15

16 Q. WHAT HAS THE COMPANY PROPOSED FOR ACCOUNT 369.1 –
17 DISTRIBUTION SERVICES?

18 A. The Company has proposed a negative 75% net salvage for this account. This
19 represents a 25-percentage point increase (that is, increase in negativity, which
20 would translate into an increase in the amount of expense to be recovered) from
21 its existing net salvage of a negative 50%.

22

1 Q. WHAT IS THE COMPANY'S BASIS FOR ITS PROPOSED NET SALVAGE
2 PERCENTAGE?

3 A. Historically the Company has incurred an average 116% negative salvage value
4 for this account. The Company also claims that it has routinely experienced
5 higher levels of negative net salvage over time. The Company further identifies
6 that its 3-year rolling band analysis yields a range from a positive 40% to a
7 negative 800%. Therefore, based on the Company's "experience and expectations
8 and anticipated level of increased retirement activity at progressively higher
9 retirement cost", it estimates a negative 75% net salvage. (See Exhibit _ (JP-3),
10 2003 depreciation study at page 4-42).

11
12 Q. DO YOU AGREE WITH THE COMPANY'S PROPOSED VALUE?

13 A. No. The Company presented no clear data to demonstrate that a negative 75% is
14 a reasonable level for this sub account. The Company did recommend a negative
15 50% level in its 2002 depreciation study. (See Exhibit _ (JP-9), 2002 depreciation
16 study at page PEF-RC-017685). The one additional year of data in 2003 reflected
17 a zero (0) percent net salvage level. Thus, there does not appear to be any
18 historically based reason to increase (make more negative) its 2002 recommended
19 negative net salvage level by 25 percentage points. The 2002 depreciation study,
20 recognized reuse and relocation as significant factors in gross salvage. This is
21 contrary to Mr. Robinson's unexplained reason for eliminating almost all
22 consideration of gross salvage. This almost total elimination of gross salvage is
23 more than questionable given Mr. Robinson's statement in his deposition that he

1 was “unable to really get any definitive answer” to his question as to why gross
2 salvage was at high levels. (See Exhibit __ (JP-2), Mr. Robinson’s deposition at
3 page 157). Further, Mr. Robinson takes this position in spite of his own linear
4 trend model that forecasts a positive 192% level for gross salvage.

5
6 Q. WHAT ARE YOU RECOMMENDING?

7 A. I am recommending the retention of the existing negative 50% net salvage for this
8 account. My recommendation recognizes that the Company will continue to
9 receive gross salvage to some extent due to customer requested relocations, a fact
10 that Mr. Robinson failed to recognize. Until the Company obtains more stable
11 and reliable data, a negative 50% net salvage is a reasonable level for this
12 account.

13
14 Q. WHAT IS THE IMPACT OF YOUR RECOMMENDATION?

15 A. My recommendation results in a \$1,018,782 reduction to depreciation expense or
16 a \$19,743,885 increase in the excess reserve imbalance based on plant as of
17 December 31, 2005.

18
19 j. Account 369.2 – Distribution Services

20
21 Q. WHAT HAS THE COMPANY PROPOSED FOR ACCOUNT 369.2 –
22 DISTRIBUTION SERVICES, FOR NET SALVAGE?

1 A. The Company has proposed a negative 25% net salvage for this account. This is a
2 10-percentage point increase (that is, increase in the negativity of the factor,
3 which would translate to an increase in the amount to be recovered) from its
4 existing level of negative 15%.

5
6 Q. WHAT IS THE COMPANY'S BASIS FOR ITS PROPOSED NET SALVAGE
7 PERCENTAGE?

8 A. Historically, this account yields an overall positive 4% net salvage. The
9 Company's 3-year rolling band analysis yields a range from a positive 390% to a
10 negative 52%. The Company's inflation model and linear trend analysis yield a
11 negative 30%. From these items of information, the Company states that it based
12 its estimate on the "Company's experience and expectations and anticipated level
13 of increase retirement activity at progressively higher retirement cost." (See
14 Exhibit _ (JP-3), 2003 depreciation study at page 4-43).

15
16 Q. DO YOU AGREE WITH THE COMPANY'S PROPOSED VALUE?

17 A. No, the Company has provided almost no data to demonstrate that a negative 25%
18 is a reasonable level for this sub account. While the 2002 depreciation study
19 recommended a negative 10% net salvage, the one year of subsequent data was
20 almost \$9 million of retirements and only \$44,135 of negative net salvage, or less
21 than a negative 1%. (See Exhibit _ (JP-9), 2002 depreciation study at page PEF-
22 RC-017686), and Exhibit _ (JP-3), 2003 depreciation study at page 8-134).
23 Therefore, the only thing that has materially changed between studies is that the

1 Company is proposing a much more negative net salvage when additional data
2 indicates otherwise. Contrary to the Company's statements, the trend in the most
3 recent data is toward a zero (0) level of net salvage, not an increasingly negative
4 level of net salvage. In addition, the Company's database averaged a positive 4%
5 net salvage.

6
7 Mr. Robinson apparently relied heavily on linear trend and inflation based trend
8 models when assessing this account. The linear trend model once again produced
9 a theoretically impossible negative value. This did not stop Mr. Robinson from
10 including it in his total forecast. The depreciation study sets forth a negative
11 3.42% gross salvage and a 26.76% cost of removal to establish a forecasted net
12 salvage of a negative 30.18%. (See Exhibit _ (JP-3), 2003 depreciation study at
13 page 8-136). Mr. Robinson's inflation model has previously been shown to be
14 flawed and misguided. Therefore, Mr. Robinson's proposal is contrary to reason
15 and logic and should be rejected.

16
17 Q. WHAT ARE YOU RECOMMENDING?

18 A. I am recommending a zero (0) % net salvage for this account as a reasonable
19 value. My recommendation relies on the trend in the data towards zero (0). I
20 further consider that future retirement will reflect some level of abandonment, a
21 concept Mr. Robinson agreed in his deposition. My conclusion is reinforced by
22 industry averages that support a zero value. (See Mr. Robinson's deposition
23 transcript at page 161 at Exhibit _ (JP-2)).

1 Q. WHAT IS THE IMPACT OF YOUR RECOMMENDATION?

2 A. My recommendation results in a \$3,197,837 reduction to depreciation expense or
3 a \$94,054,077 increase in the excess reserve imbalance based on plant as of
4 December 31, 2005.

5 k. Account 373 – Distribution Street Lighting

6

7 Q. WHAT HAS THE COMPANY PROPOSED FOR ACCOUNT 373 –
8 DISTRIBUTION STREET LIGHTING, FOR NET SALVAGE?

9 A. The Company has proposed a negative 20% net salvage. This is a 10-percentage
10 point increase (that is, increase in negativity and increase in expense to be
11 collected from customers) from the existing net salvage of negative 10% and a 15
12 percentage point increase from the Company's recommendation in its 2002
13 depreciation study. (See Exhibit _ (JP-9), 2002 depreciation study at page PEF-
14 RC-017688).

15

16 Q. WHAT IS THE COMPANY'S BASIS FOR ITS PROPOSAL?

17 A. While the depreciation study recognizes that the overall experience was a positive
18 15% net salvage, Mr. Robinson claims that "more recent years have experienced a
19 considerable amount of negative net salvage in the range of negative twenty (20)
20 to ninety (90) percent." Mr. Robinson then claims that "future periods are
21 anticipated to experience similar levels of higher negative net salvage." Finally,

1 he states that his estimate is based on “the trend of recent experience and future
2 expectations.” (See Exhibit _ (JP-3), 2003 depreciation study at page 4-46).

3
4 Q. DO YOU AGREE WITH THE COMPANY’S PROPOSED VALUE?

5 A. No. The Company has provided virtually nothing in support of its proposed net
6 salvage. Its reliance on recent trends and future expectations is misleading. The
7 trends for the last several 3-year bands are driven heavily by the 2001 activity. In
8 2001, the Company experienced one of the lowest levels of retirements, but the
9 second highest dollar level of cost of removal and the highest percentage of cost
10 of removal. The 2001 retirements figure was \$953,933 while the cost or removal
11 was \$1,799,003. (See Exhibit _ (JP-3), page 8-148 of the 2003 depreciation
12 study). These values compare to average retirement and cost of removal values
13 for the remaining period of \$2,385,381 and \$380,406, respectively. (See Exhibit
14 _ (JP-3), pages 8-148 and 8-151 of the 2003 depreciation study). This data is
15 more than suspect. In fact, Mr. Robinson could not explain the negative salvage
16 in 1997. In his deposition, Mr. Robinson stated, “it doesn’t make sense.” (See
17 Mr. Robinson’s deposition transcript at page 163 at Exhibit _ (JP-2)). Moreover,
18 the Company’s 2002 depreciation study recommended a reduction in the level of
19 negative net salvage to only a negative 5%. The trend in the data, other than the
20 anomalous 2001 data, is more toward a zero (0) level.

21
22 Q. WHAT ARE YOU RECOMMENDING?

1 A. I am recommending a zero (0) percent net salvage. My recommendation relies on
2 the trend in the historical data, recognizing that irregularities do exist in the
3 recorded data. Unlike Mr. Robinson's approach, my recommendation recognizes
4 some level of gross salvage given that it has continuously been experiencing
5 positive salvage even during periods when the Company was not selling systems.
6 Further, industry data also confirm the reasonableness of a zero (0) value.

7

8 Q. WHAT IS THE IMPACT OF YOUR RECOMMENDATION?

9 A. My recommendation results in a \$4,934,540 reduction to depreciation expense or
10 a \$53,363,464 increase in the excess reserve imbalance based on plant as of
11 December 31, 2005.

12

13 Q. WHAT IS THE COLLECTIVE IMPACT OF YOUR RECOMMENDATIONS,
14 AS COMPARED TO PEF'S DEPRECIATION PROPOSAL?

15 A. My recommendations result in a reduction (that is, less negative, meaning lower
16 expenses to be collected from customers, relative to Mr. Robinson's study) of
17 \$713,970,605 to the amount of negative net salvage the Company incorporated in
18 the calculation of its proposed depreciation rates and revenue requirements. The
19 \$713,970,605 flow back to customers of the resulting additional excess reserve
20 over 4 years results in a reduction to revenue requirement of \$211 million. Even
21 if the FPSC flows the excess net salvage reserve over the remaining life of the
22 plant, this would still result in an annual depreciation expense reduction of
23 \$34,541,975 below the company's proposal.

1 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

2 A. Yes.

1 STATE OF FLORIDA)

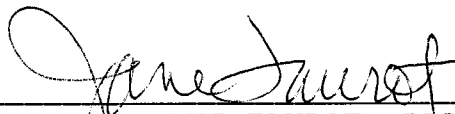
2 : CERTIFICATE OF REPORTER

3 COUNTY OF LEON)

4 I, JANE FAUROT, RPR, Chief, Office of Hearing
5 Reporter Services, FPSC Division of Commission Clerk and
6 Administrative Services, do hereby certify that the foregoing
7 prefiled testimony was assembled under my direct supervision.

8 I FURTHER CERTIFY that I am not a relative, employee,
9 attorney or counsel of any of the parties, nor am I a relative
10 or employee of any of the parties' attorney or counsel
11 connected with the action, nor am I financially interested in
12 the action.

13 DATED THIS 12th day of September, 2005.

14 

15 _____
16 JANE FAUROT, RPR
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19 Administrative Services
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