1 **Introduction and Overview**

2 **Q.** **Please state your name.**

3 A. My name is Samuel C. Hadaway. I previously filed direct testimony in this

4 proceeding.

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

6 A. The purpose of my rebuttal testimony is to review and evaluate the cost of capital

7 recommendations offered by Mr. Stephen G. Hill in testimony originally filed

8 July 2, 2004 (corrected July 7, 2004) on behalf of Commission Staff and the

9 Office of Public Counsel (Staff/Public Counsel). I will also respond to Mr. Hill's

10 criticisms of my initial testimony.

11 **Q.** **What are the parties' rate of return positions?**

12 A. The Company is requesting an overall rate of return (ROR) of 8.743 percent. The

13 Company's request is based on its actual capital structure at September 30, 2003,

14 as presented by Company witness Donald Furman; the cost rates for debt and

15 preferred stock, as presented by Company witness Bruce Williams; and the 11.25

16 percent rate of return on equity (ROE) presented in my initial testimony. In

17 contrast, Staff/Public Counsel recommends an overall ROR of 7.72 percent, based

18 on Mr. Hill's 9.375 percent ROE and his adjustments to the Company's capital

19 structure. Given Staff's calculation of PacifiCorp's net rate base in the

20 Washington, and Staff's net-to-gross conversion factor, the difference in revenue

21 requirement between the parties' ROR positions is $8.4 million. (Using the

22 Company's rate base increases the difference to $10.8 million.)

1   **Q.**   **The difference between the Company's requested ROE and Mr. Hill's**

2   **recommendation seems large. What are the key differences between the two**

3   **positions on ROE?**

4   A.   The Company's requested 11.25 percent is from my 11.0 percent ROE estimate

5   for single-A rated utilities, plus a 25 basis point (0.25 percent) addition to account

6   for PacifiCorp's additional power cost risks and other inter-jurisdictional

7   allocation issues described in Mr. Furman's direct testimony. Mr. Hill develops a

8   judgmental ROE range of 9.0 percent to 9.75 percent, with a midpoint

9   recommendation of 9.375 percent. His recommendation is from the traditional

10   constant growth DCF model, with passing consideration for other estimation

11   methods and expected economic conditions (Hill Corrected Direct, pp. 47-48).

12   The differences between the two ROE positions stem from three areas:

13   1)   Mr. Hill's lower dividend yields and growth rates in his discounted
14   cash flow (DCF) analysis;

15   2)   Mr. Hill's failure to reasonably adjust his DCF results for the much
16   higher interest rates expected over the next 12 to 18 months; and

17   3)   Mr. Hill's failure to recognize or respond at all to PacifiCorp's
18   higher operating risks and the other circumstances in the State of
19   Washington.

20   A careful examination of these differences shows that Mr. Hill's ROE

21   recommendation is unreasonably low.

22 **Q.**   **Are there other more general factors the Commission should consider in its**

23   **evaluation of ROE?**

24 A.   Yes. It is extremely important to note that Mr. Hill's analysis is based on data

25   from the very bottom of the lowest interest rate cycle in 40 years. Furthermore, as

1   was projected at the time Mr. Hill prepared his testimony, the downward trend in

2   interest rates has reversed and consensus economic projections now call for much

3   higher capital costs over the next 12 to 18 months. (*See* Exhibit No. ___

4   (SCH-8).)

5   Although data and projections like these were available to Mr. Hill when

6   he prepared his testimony, in his analysis and recommendation he ignores these

7   basic economic facts. For example, at pages 7-15, Mr. Hill provides a section

8   titled "Economic Environment." Here he quotes various opinions about economic

9   activity and interest rates, focusing on data available through the February-April

10   2004 time period. He acknowledges (at page 15) that interest rates on long-term

11   Treasury bonds were expected to rise from 4.93 percent (March 26-April 30, 2004

12   average) to 5.9 percent by next year. However, Mr. Hill makes no meaningful

13   effort elsewhere in his testimony to incorporate these projections or to adjust his

14   bare quantitative results. The final result is an unrealistically low ROE.

15   Also, Mr. Hill would have the Commission believe that his

16   recommendation is consistent with "allowed equity returns in the single-digits"

17   (page 52) granted by other state utility commissions. Mr. Hill's comparison of

18   PacifiCorp's required return to those ordered in selected electric cases in the

19   Northeast and for smaller telephone, water, and gas companies elsewhere is not

20   on point. And, even in those cases, the lowest ROEs for the lower risk electric

21   companies were higher than Mr. Hill's recommendation for PacifiCorp (Jersey

22   Central Power & Light, 9.50 percent (9.75 percent prior to a 25-basis point

23   penalty for service quality); Rockland Electric Co., 9.75 percent; and Connecticut

1   Light & Power, 9.85 percent (footnote 16, page 52)). In contrast to these low-risk

2   T&D companies, PacifiCorp is a fully integrated utility with significant

3   dependence on purchased power and no protection from fluctuating purchased

4   power costs.

5   Another irrelevant example is Mr. Hill's statement that "…the West

6   Virginia Public Service Commission recently set the equity return of a water

7   utility company at 7.0 percent" (page 52). Such a reference is potentially

8   misleading (if taken seriously) and bears no relationship to the market cost of

9   equity capital. Mr. Hill's tout of such a regulatory commission's setting an ROE

10   at or below the company's cost of debt is a telling testament to the extremeness of

11   his position in the present case.

12   **Rebuttal of Mr. Hill's ROE Analysis**

13   **Q.   At page 5, Mr. Hill states that his rate of return recommendations would**

14   **support an investment-grade bond rating for a utility with a business**

15   **position of "4." Is PacifiCorp' business position ranked a "4" and is a**

16   **minimal investment grade BBB bond rating appropriate?**

17   A.   No. Mr. Hill is incorrect about PacifiCorp's business profile, and his target bond

18   rating is inappropriate. Mr. Hill's source for PacifiCorp's business rank is a

19   Standard & Poor's (S&P) publication from June 1999 (page 5, footnote 1). The

20   electric industry has undergone tremendous change since 1999 and, since then,

21   S&P has lowered PacifiCorp's business position to a rank of "5." More

22   important, Mr. Hill's minimal investment grade bond rating target at BBB is

23   entirely inconsistent with PacifiCorp's actual circumstances. It is inappropriate

1   for Mr. Hill to claim adequate financial condition for PacifiCorp at BBB

2   standards when PacifiCorp's actual bond rating is single-A. While Mr. Hill

3   accepts the Company's low cost rates for preferred stock and long-term debt

4   (page 32) which result from the Company's single-A bond rating, he does not

5   support capital structure parameters or a rate of return consistent with this rating.

6   This one-sided approach is especially inappropriate given the large capital

7   requirements described in Company witness Judi Johansen's testimony and recent

8   efforts by PacifiCorp and ScottishPower to maintain the Company's credit

9   ratings.

10   During the Western energy crisis, PacifiCorp absorbed over $700 million

11   in excess power costs, including $91 million in Washington. To restore the

12   financial damage to the Company's balance sheet caused by these losses,

13   PacifiCorp suspended its dividend to Scottish Power in the first quarter of 2002.

14   In 2002, Scottish Power also infused $150 of new equity to shore up PacifiCorp's

15   balance sheet and to prevent a potential credit rating downgrade. For Mr. Hill to

16   provide no recognition for these efforts and to target a minimal BBB bond rating

17   is unreasonable and inappropriate.

18 **Q.   At page 9, Mr. Hill cites an A.G. Edwards stock brokerage report on natural**

19 **gas utilities. He claims that an 8.45 percent expected return for gas**

20 **distribution utilities calculated in that report confirms the reasonableness of**

21 **his 9.00 percent to 9.75 percent ROE recommendation. Is this comparison**

22 **appropriate?**

23 A.   No. The 8.45 percent Mr. Hill quotes is A.G. Edwards' indication of expected

1   *total return* to its clients from gas distribution companies. In the same report,

2   Edwards offers the following verbal assessment of gas distribution company

3   prospects:

4   We believe gas distributor stocks will underperform other
5   gas utility stocks in 2004. Gas distributor stocks, which
6   tend to have higher dividend payouts and yields, performed
7   well in the first quarter as a rash of closed end utility funds
8   invested new money into the group. We do not believe this
9   inflow of money is sustainable and look for gas distributor
10   stock prices to return to more fundamentally justified prices
11   by year end.   (A.G. Edwards, Gas Utilities Quarterly
12   Review, April 5, 2004, page 1.)
13   These near-term, pessimistic projections for gas distribution companies do not

14   provide an appropriate comparison for the results of a long-term growth DCF

15   analysis.

16   Although the A.G. Edwards data are presented in a yield plus growth

17   format, a careful review of the tables from which Mr. Hill took his data shows

18   that near-term opinion dominates. For example, for integrated gas utilities the

19   A.G. Edwards yield plus growth total return is 10.8 percent (A.G. Edwards,

20   Figure 24), and their assessment of near-term performance for the integrated gas

21   group is as follows:

22   We look for integrated gas utility stocks to once again
23   outperform other gas utility groups. We believe integrated
24   gas utility stock prices have not factored in the rise in
25   natural gas prices that occurred this winter. We look for
26   the stocks to perform well as managements raise earning
27   guidance and analysts raise estimates in the upcoming
28   quarters. (A.G. Edwards, page 1)
29   Mr. Hill use of analysts' near-term estimates is inappropriate and potentially

30   misleading. In the DCF model, it is not appropriate to use near-term prospects

31   from A.G. Edwards or any other analyst group to proxy for long-term investor

1   expectations. While it may be true that Edwards and others believe gas

2   distribution stocks will "grow" by some low level for the next few quarters, it is

3   not correct to add a similarly low dividend yield and conclude that the result

4   supports an 8.45 percent ROE.

5   In fact, analysts' pessimistic outlooks for utility stocks are largely driven

6   by projections for higher interest rates in the near future. Given the interest rate

7   sensitivity of utility stocks (other things equal, utility stock prices go down when

8   interest rates rise), analysts do not expect good utility stock price performance

9   over the next year or two. Mr. Hill's inappropriate use of the A.G. Edwards gas

10   utility report should cast further doubt on his judgment regarding an unreasonably

11   low cost of equity for PacifiCorp.

12   **Q.**   **On page 10, Mr. Hill points to a "recent" average A-rated utility bond yield**

13   **of 5.71 percent and discusses "recent loosening" by the Federal Reserve Bank**

14   **(Fed) as support for his low ROE position. Have circumstances changed**

15   **relative to Mr. Hill's statements?**

16   A.   Yes. The Federal Reserve's monetary policy has reversed from "loosening"

17   (reducing interest rates) to "tightening" to avoid potential inflation in the current

18   rapidly growing economy. On June 30, 2004, the Fed increased the target Federal

19   Funds interest rate by 0.25 percent, and has made clear its intentions to

20   consistently raise rates as the economy expands. Most recently in his semiannual

21   report to Congress on monetary policy July 21-22, 2004, Fed Chairman Alan

22   Greenspan reiterated plans to increase rates and noted that, if necessary, the Fed

23   would not hesitate to take a more aggressive stance to contain inflation in the

1   future. In its most recent edition, *BusinessWeek* offered the following assessment

2   of the Fed's future monetary policy:

3   To that end, the key question about monetary policy is not
4   how much further the Fed will have to raise rates….<u>Almost</u>
5   <u>all economists agree the Fed will have to lift its funds target</u>
6   <u>by as much as three percentage points in the coming year or</u>
7   <u>so.</u> The crucial question is how fast policymakers will have
8   to move. (*BusinessWeek*, August 2, 2004, page 29,
9   emphasis supplied.)

10   Since March 2004, when single-A utility interest rates dipped to 40-year lows, the

11   downtrend in interest rates has reversed. In May 2004, the single-A utility rate

12   averaged 6.62 percent (Moody's/Mergent Bond Record, Corporate Bond Yield

13   Averages, June 2004). This level represented an increase of 0.89 percent in only

14   two months from the 5.71 percent single-A rate quoted by Mr. Hill. Furthermore,

15   as shown in Exhibit No.___(SCH-8), projections are for further significant rate

16   increases through at least the 3rd Quarter of 2005. While I agree with Mr. Hill that

17   utility equity costs do not move in exact lock-step with interest rates, certainly the

18   two move in the same direction. The current level of interest rates and direction

19   of interest rate trends are further indications that Mr. Hill's ROE recommendation

20   is far too low.

21 **Q.**   **At pages 13-15, Mr. Hill provides a lengthy quote from the February 27, 2004**

22   ***Value Line Selection & Opinion*, and from this Mr. Hill concludes that**

23   **interest rates are likely to move somewhat higher in coming years but will**

24   **"remain near their current historically low levels for some time to come." Is**

25   **Mr. Hill's conclusion consistent with *Value Line's* current opinions?**

26 A.   Not entirely. While *Value Line* has maintained a moderate view on expected

27   economic growth, in its most recent edition covering electric utilities in Eastern

Rebuttal Testimony of Samuel C. Hadaway   Exhibit No.___(SCH-7T)

1   U.S., it offered the following opinion:

2   The yield on 10-year U.S. Treasury notes has been fluctuating
3   around 4.5% lately. Our 2007-2009 economic projections call
4   for this rate to rise to 6.0%. If our forecast is on the mark, this
5   would hurt the price of utility stocks (everything else being
6   equal). In fact, the current price of many utility equities is
7   within our 3- to 5-year target price ranges. Such a scenario
8   doesn't provide for attractive long-term total-return potential,
9   even for those stocks that offer the potential for dividend
10   growth. (*Value Line Investment Survey*, May 14, 2004, p.
11   1774.)

12   Similar to the S&P *Trends & Projections* data presented in No.___(SCH-8) and

13   discussed previously, *Value Line's* outlook is for significantly higher interest

14   rates. With the benefit of more recent opinions, it appears that Mr. Hill's

15   conclusions about future interest rates, relative to consensus projections, is a

16   further understatement.

17   **Q.   On pages 16 and 17, Mr. Hill discusses the reduction in Federal income tax**

18   **rates on dividends and states that this is an additional reason for lower**

19   **required returns for utilities. Do you agree with Mr. Hill's assessment of this**

20   **issue?**

21   A.   Again, not entirely. Mr. Hill's discussion and example are at best an

22   exaggeration, and they are potentially misleading. First, his position and his

23   "brokerage-house tout" focusing on the lower tax rate might be more nearly

24   correct if most utility shareholders were in the 30 percent tax bracket he uses in

25   his example. In fact, they are not. A large percentage of utility shares are held by

26   institutional investors, such as pension funds, that pay no taxes at all. And, for

27   many other institutional investors, and for "widows and orphans" and retiree type

28   investors who hold utility stocks for their dividends, taxes are not a significant

Rebuttal Testimony of Samuel C. Hadaway   Exhibit No.___(SCH-7T)

1   issue. More important, to the extent that the lower tax rate has an effect, that

2   effect is already fully contained in the higher market prices and lower dividend

3   yields employed in Mr. Hill's DCF analysis. Given the entirely pessimistic view

4   of utilities offered by *Value Line* and other investment advisors, the A.G. Edwards

5   upward valuation offered by Mr. Hill seems doubtful, and Mr. Hill's tax rate

6   example clearly overstates the potential tax rate effect.

7   **Q.**   **At pages 18-24, Mr. Hill offers an extended argument that utility investors**

8   **will pay more than book value for utility shares only if they expect utilities to**

9   **earn a higher return on book value than the investors' required return. Is**

10   **Mr. Hill's position correct?**

11   A.   No. Mr. Hill's position is something of a tautology, but it is based on an entirely

12   false premise. If one were to accept the premise that investors expect to earn in

13   the market only the same return as utilities earn on book value, then, and only

14   then, might Mr. Hill's argument have some merit. In reality, investors set *their*

15   return requirements and *their* price expectations on what *they* expect to earn on

16   *their* investment. While the utility's earned return is important, numerous other

17   factors often dominate investor expectations and utility market-to-book ratios.

18   For example, if investors expect further industry consolidation with potential

19   stock price merger premiums and additional operating efficiencies, they may pay

20   stock prices significantly above book value. Similarly, if investors expect further

21   deregulation and higher unregulated returns, they may pay more that book value.

22   If, as noted by Mr. Hill from *Value Line's* projections, investors expect utilities to

23   earn 11 percent on book value, this is more likely because investors reasonably

1   expect regulators to authorize returns of about 11 percent, and that utilities are

2   more likely to earn their authorized return than some other number. In fact, it

3   seems entirely unlikely that investment services like *Value Line* would project

4   earned utility returns on book value at 11 percent if they expected utility

5   commissions to grant only single-digit returns as Mr. Hill recommends.   Mr.

6   Hill's position is also inconsistent with actual capital market behavior. His

7   statement at page 18, lines 4-6, "…when market prices are above book value,

8   investors expect utilities to earn equity returns that are greater than the market-

9   based cost of equity…." can be, and currently is, entirely wrong. Investors pay

10   the market prices they pay for utility stocks based on what *they* expect to earn on

11   *their* investment.

12 **Q.   Can you provide an example to illustrate this point?**

13 A.   Mr. Hill's circular example (pages 20-21) can be used to demonstrate this point.

14   As he did, let us assume that a utility has a book value of equity equal to $10 per

15   share. Let us also assume that regulators correctly assess the cost of equity at 11

16   percent, and for consistency with Mr. Hill's example, that utilities earn the

17   allowed return and pay out all earnings as dividends. Under this most extreme

18   payout assumption, the investor's total return is a dividend of $1.10 per year ($10

19   book value times 11 percent return = $1.10 dividend). If shareholders could buy

20   utility shares at book value, and if their only expected source of return were the

21     $1.10 dividend, their total rate of return would be the same 11 percent earned by

22   the utility on book value.

Rebuttal Testimony of Samuel C. Hadaway   Exhibit No.___(SCH-7T)

1   On the other hand, if investors (1) recognize that utility mergers in the past

2   5 years have often occurred at market-to-book ratios of two times or more,

3   (2) recognize that the average market-to-book ratio for the past 5 years has been

4   1.57 times (see Exhibit No.___(SCH-9)), (3) recognize that hundreds of millions

5   of dollars in merger synergies have occurred, (4) recognize that potential returns

6   in unregulated areas may be higher than 11 percent, or (5) expect any scenario

7   other than Mr. Hill's 100 percent dividend payout, they will realistically pay more

8   than book value, without any expectation that the utility will earn more than its

9   allowed return on book value.

10   To continue with Mr. Hill's example, let us assume that investors do

11   recognize and expect utility mergers to continue at market-to-book ratios of 1.8

12   times. If the utility stock could be bought for its $10 book value, in a merger

13   investors who had bought the stock at $10 would make an 80 percent capital gain

14   (a price increase from $10 to $18 = 80 percent gain), plus Mr. Hill's 11 percent

15   dividend. Clearly, under such circumstances, utility stocks will sell for more than

16   book value. Even if investors paid the current 1.61 market-to-book ratio noted by

17   Mr. Hill ($16.10 per share in our example), a further increase to $18 per share in a

18   merger would provide an 11.8 percent capital gain (a price increase from $16.10

19   to $18 = 11.8 % gain), plus Mr. Hill's 11 percent dividend. This total return of

20   almost 23 percent (11.8% capital gain plus 11% dividend yield = 22.8%) easily

21   explains why investors pay more than book value for utility shares. And, contrary

22   to Mr. Hill's assertions, their motives have nothing to do with the utility's being

23   allowed an excessive ROE. Mr. Hill's market-to-book ratio discussion is a further

1   example of his one-sided approach to the ROE issue.

2   **Q.**   **At pages 33-43, and in his Appendix C (Exhibit No.___(SGH-4)), Mr. Hill**

3   **discusses his estimate of growth, or the "g" term, for the DCF model. Is**

4   **there a shorter version that explains Mr. Hill's growth rates?**

5   A.   Yes. In fact, it is clear that the growth rates in Mr. Hill's DCF estimates do not

6   rely on the 11 pages of discussion in the text of his testimony, and are largely

7   based on his subjective discussion in Appendix C with reference to the

8   calculations in Exhibit No.___(SGH-9). In fact, had Mr. Hill applied the results

9   he calculated in his exhibit, the ROE estimates for several of his companies would

10   have been well below 8 percent, and for several of the companies the results

11   would have been much higher.

12   For example, for Empire District Electric (EDE), Mr. Hill calculates a

13   dividend yield of 5.8 percent and adds a 4.03 percent growth rate to produce an

14   ROE of 9.83 percent. In Mr. Hill's Exhibit No.___(SGH-9), however, there are

15   no growth rates for EDE above 2.0 percent, and the average rate is -0.27 percent.

16   In Appendix C Mr. Hill acknowledges the company's poor recent history, its

17   projected zero dividend growth rate, and a 2.0 percent projected earnings growth

18   rate from First Call. He then miraculously determines that investors should

19   expect a 3.25 percent "sustainable" growth rate. (Appendix C, pages iii and iv.)

20   Similarly, even though the company's outstanding shares are projected to grow at

21   less than 1 percent, he uses a 3.5 percent "shares growth times market-to-book

22   ratio" (sv term) in his sustainable growth equation. Mr. Hill takes similar,

23   although less extreme, liberties with each company in his DCF analysis. With

1   these kinds of adjustments, Mr. Hill's DCF analysis might produce almost any

2   level of ROE. Such subjectivity in DCF calculations raises serious questions

3   about the entire exercise.

4   **Q.**   **At pages 48-52, Mr. Hill discusses flotation costs and explains in detail why**

5   **he believes no adjustment to ROE should be made to account for flotation**

6   **costs. Is Mr. Hill's discussion necessary or appropriate?**

7   A.   No. Aside from the fact that Mr. Hill is incorrect in most of his flotation cost

8   discussion (flotation costs are legitimate expenses that are allowed in many

9   regulatory jurisdictions), in the present case his lengthy discussion is unnecessary

10   because PacifiCorp has not requested flotation costs. Like several of Mr. Hill's

11   other criticisms, his flotation cost discussion is entirely misplaced.

12   **Response to Hill Criticisms of Direct Testimony**

13   **Q.**   **At page 55, Mr. Hill criticizes your DCF growth rate analysis as**

14   **"mechanistic." How do you respond to that criticism?**

15   A.   As compared to Mr. Hill's subjective selection of growth rates discussed

16   previously, my approach may appear to be relatively "mechanistic." A

17   "mechanistic" approach, in contrast to Mr. Hill's, can be verified by reference to

18   widely available data, however. In my constant growth DCF analysis, I average

19   four methods for estimating the growth rate: sustainable "b times r" growth

20   (without upward adjustment for possible share issuance), 5-year projected

21   earnings growth from Zack's survey of professional analysts, *Value Line's* 3-to-5

22   year growth projections, and average long-term growth in nominal GDP. Since

23   the required growth rate in the DCF model is the very long-term growth rate

1   *expected by investors*, it seems unlikely that Mr. Hill's approach, with widely

2   varying results across companies, is appropriate. Over the very long-run, most

3   major utility companies will grow at about the same rate as the overall economy,

4   otherwise they will be absorbed by others with better growth prospects.

5   In the single-stage model, I use the four-part average described above to

6   estimate growth, and I apply the average without adjustment. This approach

7   avoids the obvious potential for subjectivity bias that exists in Mr. Hill's

8   estimates. While it is arguably true that the traditional single-stage DCF model

9   currently produces low ROE estimates, I explained in my initial testimony and I

10 have reinforced in this testimony why projected economic conditions and much

11 higher expected interest rates should also be considered. In the DCF format, the

12 multistage versions of the model and alternative growth rate methods may capture

13 present economic conditions and forecasts better than the single-stage model.

14 Under any circumstances, it seems more reasonable to present the models for

15 what they are, without subjective adjustments that determine the models' results.

16 **Q.   At page 56, Mr. Hill notes that you testify to a projected GDP growth rate of**

17 **"over 4 percent," but you use a 6 percent GDP growth rate in you DCF**

18 **growth calculations. Why is there a difference?**

19 A.   Mr. Hill is obviously confused in his criticism. The 4 percent projected growth

20 rate in GDP is for "real" GDP growth (excluding inflation). The long-term

21 "nominal" GDP growth rate I use in my DCF growth estimates includes inflation.

22 The difference is correct and appropriate because growth in either utility earnings

23 or dividends in the DCF model is in nominal terms. The difference can easily be

1   seen in the first few rows of Exhibit No.___(SCH-8). The projected annual rate

2   of increase in *real* GDP for the 3rd and 4th quarters of 2004 are 4.7 percent and 4.8

3   percent, respectively. The annual rate of increase in *nominal* terms for the two

4   quarters is 7.2 percent and 6.9 percent, respectively.

5 **Q. At pages 56-57, Mr. Hill discusses *Value Line's* projected earned rates of**

6   **return and says that your analysis implies an assumption that equity returns**

7   **will increase 30 percent every five years into the indefinite future. Is this**

8   **true?**

9 A. I have not made such a projection, and it is difficult to tell from Mr. Hill's

10   discussion what his concerns are. He begins with data for Northeast Utilities for

11   2007 and then switches to lower numbers for DPL, Inc. for the 2001-2003 time

12   period. From that comparison he draws the conclusion that my analysis implies a

13   30 percent perpetual increase in return. It is not clear why such a mixed-company

14   comparison justifies any criticism of my analysis.

15 **Q. At pages 57-60, Mr. Hill criticizes excessive reliance on analysts' projected**

16   **earnings growth rates and then discusses "rosy" expectations, the**

17   **"Cinderella effect," and academic studies that "do not provide a rationale for**

18   **an *exclusive* reliance on earnings growth rate projections. (emphasis in**

19   **original) Is this criticism and discussion relevant to your testimony?**

20 A. I don't think so. While it is true that I include analysts' estimates as part of the

21   four-part growth rate average in my single-stage DCF analysis, I also include the

22   "b times r" sustainable growth method and long-term nominal growth in GDP.

23   And, more telling for Mr. Hill's "criticisms," the analysts' estimates are by far the

1   lowest of the growth estimates in my analysis. (In Exhibit No.___(SCH-5) to my

2   direct testimony, page 2, the "b times r" sustainable growth rate is 5.44 percent,

3   the 20-year GDP growth rate is 6.0 percent, and the Zack's and *Value Line*

4   "analyst" estimates are 4.48 percent and 4.88 percent, respectively.) Additionally,

5   in my multistage DCF estimates, I did not use analysts' earnings growth estimates

6   at all. It is thus not clear why Mr. Hill included his 4-page critique of analysts'

7   estimates in his present testimony, except that it is consistent with his approach

8   not to accord much weight to objective analyses in his testimony.

9 **Q.   At pages 61-62, Mr. Hill says that he "recalculated" your single-stage DCF**

10   **model and obtained ROEs of less than 9 percent. Are Mr. Hill's**

11   **modifications to your constant growth analysis appropriate?**

12 A.   Given the timeframe of his analysis, I am not surprised that he obtained lower

13   results from the single-stage DCF model. From last Fall when I prepared my

14   original analysis until March of this year, DCF results from the traditional

15   constant growth model generally tracked interest rates downward. In the basic

16   yield plus growth format, lower dividend yields and pessimistic forecasts for

17   utilities from *Value Line* and other analysts were reflected directly in lower

18   calculated DCF results.

19   More important for my initial analysis, however, my original constant

20   growth DCF range of 9.8 percent to 10.2 percent was hardly the basis for the 11.0

21   percent single-A utility ROE recommendation I offered in my direct testimony. I

22   explained in that testimony that with higher projected interest rates the cost of

23   capital should be adjusted upward. The higher interest rates from those

1   projections are now occurring and, as I have shown in this testimony, current

2   projections are for significantly higher rates over the next 12 to 18 months. Under

3   these circumstances, Mr. Hill's "recalculation" and "adjustments" to my constant

4   growth DCF analysis are largely irrelevant.

5 **Q. On page 61, in his adjustments to your analysis, Mr. Hill again inserts a 4**

6 **percent GDP growth rate in place of your 6 percent long-term average rate?**

7 **Is this "adjustment" appropriate?**

8 A.   No. Mr. Hill is again confusing "real" and "nominal" GDP growth. If he had

9   wished to replace my long-term average GDP growth rate with a "forward-

10   looking GDP growth rate" based on current forecasts, he should have used the

11   nominal growth rates shown in Exhibit No.____(SCH-8). As I explained

12   previously, that rate is projected to be 7.2 percent and 6.9 percent for the 3rd and

13   4th quarters of 2004, respectively

14 **Q. At pages 62-69, Mr. Hill discusses and criticizes your multistage DCF**

15 **analysis. How do you respond to these criticisms?**

16 A.   Mr. Hill's general criticism of my multistage analysis is that it is more

17   complicated and requires more explicit assumptions than the single-stage

18   approach. Since I explained these features in my initial testimony, I do not

19   disagree with Mr. Hill's restatement of these issues. I do disagree, however, with

20   his position that such complexities make the model inappropriate. During a

21   period of industry transition toward a more competitive environment or a period

22   of restructuring caused by either consolidation or other events, such as the

23   Western energy crisis, many believe that the traditional single-stage DCF model is

1   not reliable. Many brokerage houses, rate of return economists, and state

2   regulatory commissions have relied on the multistage DCF approach in recent

3   years. They have chosen the more complex route because they have recognized

4   that the single-stage model's assumptions simply are not met during a period of

5   flux. Under these circumstances, Mr. Hill's sole reliance on the single-stage

6   model and his subjective inputs to that model are serious deficiencies in his

7   analysis. Mr. Hill's criticisms of the multistage approach should be evaluated in

8   this context.

9   **Q.**   **At pages 64 and 65, Mr. Hill criticizes your application of Market Price**

10   **multistage model and claims that you used a *current* price-earnings (P/E)**

11   **ratio with Value Line's *projected* earnings per share (EPS) to estimate future**

12   **price. Is this criticism accurate?**

13 A.   No. Mr. Hill again seems to have misinterpreted my analysis. In some prior

14   cases, I have used a current P/E with projected EPS. In fact, I believe a current

15   P/E provides the most appropriate assessment of current investor expectations. In

16   recent years, however, in deference to criticisms from Mr. Hill and others, I have

17   consistently used a more conservative approach of averaging *Value Line's* current

18   and projected P/Es for the market price estimate. This approach mitigates

19   concerns about a mismatch between use of current and projected data. The 5.6

20   percent ROE produced by Hill's "adjusted" Market Price Model, which uses a

21   projected P/E, simply demonstrates that my 9.8 percent to 10.7 percent Market

22   Price range is a more middle-ground approach. In any event, Mr. Hill is incorrect

23   in his criticism because I did not use only a current P/E ratio in the Market Price

1   Model, as he claims.

2 **Q.   At pages 66-67, Mr. Hill criticizes your second multistage DCF model,**

3   **questioning your use of long-term GDP growth in the second stage of the**

4   **model. Is there support for your approach?**

5 A.   Yes. Since the long-term growth expectations required in the DCF model cannot

6   be measured directly, economists tend to rely on several alternatives for

7   estimating growth. Particularly in proceedings before the Federal Energy

8   Regulatory Commission, estimates of long-term growth (as opposed to analysts'

9   five-year forecasts) have been used routinely. Such estimates have been based on

10   long-term projected profits and more general long-term economic growth

11   estimates. In their discussion of the DCF model, Brigham, Gapenski, and

12   Ehrhardt offer the following:

13   Expected growth rates vary from company to company, but
14   dividend growth on average is expected to continue in the
15   foreseeable future at about the same rate as that of the
16   nominal gross domestic product (real GDP plus inflation).
17   On this basis, one might expect the dividend of an average,
18   or "normal," company to grow at a rate of 6 to 8 percent a
19   year. (Brigham, Gapenski, and Ehrhardt, Financial
20   Management, 9th Ed., page 335.)

21 **Q.   At pages 69-79, Mr. Hill criticizes your risk premium analysis. How do you**

22   **respond to these criticisms?**

23 A.   Mr. Hill begins at pages 70-71 by criticizing the regulatory allowed rates of return

24   I use as the cost of equity in my analysis. Mr. Hill's criticism is misplaced. The

25   Regulatory Research Associates (RRA) data I use covers all major rate cases

26   since 1980. I use the annual *averages* of these data along with contemporaneous

27   annual *average* utility bond interest rates to calculate risk premiums for each year.

1   This is the appropriate approach because it compares average ROE results for the

2   entire electric industry to the same companies' average bond interest rates. Mr.

3   Hill's concern about potential "outliers" skewing the data in a sample of this size

4   is unrealistic. The RRA data are by far the most widely followed and widely used

5   data in regulatory proceedings.

6   At pages 71-74, Mr. Hill criticizes technical and statistical issues in my

7   analysis. Although I use the same technical and statistical methods used by the

8   authors he quotes (e.g., Harris and Marson and Brigham, et al (page 75)), he

9   would have the Commission believe that these methods are deficient. As a

10   general matter, no statistical method is perfect for analyzing economic data.

11   However, my approach is a standard methodology used by regulatory economists

12   and in the academic studies Mr. Hill references. His criticisms of my risk

13   premium analysis in this regard are a red herring.

14   Finally, at page 76, Mr. Hill cites my testimony before the Texas Public

15   Utility Commission *in 1982* to challenge my present findings of low risk

16   premiums during periods of high interest rates and higher risk premiums when

17   interest rates are low. He argues that higher risks in long-term bonds in the early

18   1980s created an "abnormal relationship between debt and equity returns." I do

19   not take issue with the *cause for* low risk premiums when interest rates are high,

20   or higher risk premiums when interest rates are low. The point is that interest

21   rates are presently low by historical standards, which implies from my studies and

22   from the studies Mr. Hill cites, that current equity risk premiums are wider than a

23   simple average of risk premiums since the early 1980s. This relationship is borne

1   out in every published academic study of which I am aware.

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

3 A.   Yes, it does.