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**Before the  
Idaho Public Utilities Commission**

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**In the Matter of the Application of  
PacifiCorp DBA Rocky Mountain  
Power for Approval of Changes to  
its Electric Service Schedules**  
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) **Case No. PAC-E-07-05**  
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Direct Testimony and Exhibits of

**Michael Gorman**

**Volume 2 – Cost of Capital**

On behalf of

**Monsanto Company**

Project 8819  
September 28, 2007



**BRUBAKER & ASSOCIATES, INC.**  
ST. LOUIS, MO 63141-2000

**PUBLIC**

Before the Idaho Public Utilities Commission

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Case No. PAC-E-07-05

Direct Testimony of Michael Gorman

1 Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

2 A My name is Michael Gorman and my business address is 1215 Fern Ridge Parkway,  
3 Suite 208, St. Louis, MO 63141-2000.

4 Q WHAT IS YOUR OCCUPATION?

5 A I am an energy advisor and a consultant in the field of public utility regulation and a  
6 managing principal in the firm of Brubaker & Associates, Inc. (BAI).

7 Q PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND EXPER-  
8 IENCE.

9 A These are set forth in Appendix A to my Volume 1 direct testimony.

10 Q ON WHOSE BEHALF ARE YOU APPEARING IN THIS PROCEEDING?

11 A I am appearing on behalf of Monsanto Company.

12 Q WHAT IS THE SUBJECT OF YOUR TESTIMONY?

13 A I will recommend a fair return on common equity and overall rate of return for Rocky  
14 Mountain Power (RMP or Company).

1 **Q PLEASE SUMMARIZE YOUR RATE OF RETURN RECOMMENDATIONS.**

2 A I recommend the Idaho Public Utilities Commission (IPUC or the Commission) award  
3 RMP a return on common equity of 10.0%.

4 My recommended return on equity for RMP is based on a constant growth  
5 Discounted Cash Flow (DCF) model, a two-stage growth DCF model, Risk Premium  
6 (RP) model and Capital Asset Pricing Model (CAPM) analyses. These analyses  
7 estimate a fair return on equity based on observable market information for a group of  
8 publicly traded electric utility companies that proxy RMP's investment risk.

9 I also show that my proposed return on equity provides RMP an opportunity to  
10 earn cash flows that support its credit metrics, and that will support its current bond  
11 rating. This illustration proves that a 10% return on equity will support RMP's  
12 financial integrity and access to capital.

13 As such, my recommended return on equity is fair compensation and will  
14 maintain RMP's financial integrity.

### 15 **Electric Utility Industry Market Perspective**

16 **Q PLEASE DESCRIBE THE MARKET'S PERCEPTION OF THE ELECTRIC UTILITY**  
17 **INDUSTRY OVER THE LAST SEVERAL YEARS.**

18 A Standard & Poor's (S&P) I believe captures the sentiment of the investment market  
19 toward the electric utility industry experienced over the last several years. In 2001,  
20 S&P stated it recorded 81 downgrades to utility credit ratings, with only 29 upgrades.  
21 S&P stated in 2002 that the credit rating activity in the electric utility industry was  
22 negative due to: (1) weakening financial profiles, (2) loss of investor confidence which  
23 affected the industry's liquidity and financial flexibility, (3) heightened business risk  
24 derived from more investments outside the traditional regulated utility business,

1 (4) corporate restructuring and mergers and acquisitions, and (5) certain regulatory  
2 difficulties.

3 S&P attributed most of the 2002 liquidity and credit erosion in the industry to  
4 heavy debt funded investments in higher risk non-regulated activities, and the loss of  
5 management credibility due to accounting and trading irregularities.<sup>1</sup>

6 Importantly, this negative perception of the energy industry over the last  
7 several years has been improved considerably because the industry has reverted to a  
8 "back-to-basics" business model. As part of the back-to-basics business model,  
9 utilities have been shedding non-regulated activities and using the asset sale  
10 proceeds to retire debt. Also, utilities have adopted corporate governance policies  
11 that have helped regain the confidence of the market.

12 In 2005, S&P revised its industry outlook by stating that the industry's leading  
13 indicators of credit rating tend to show that there are nearly twice as many stable  
14 outlooks as negative outlooks. S&P credits improved credit quality and liquidity  
15 enhancement for improving credit rating metrics resulting primarily from a reduction of  
16 high cost debt and elimination of higher risk non-utility investments, and the industry's  
17 shift to a back-to-basics business model, which concentrates on core competencies,  
18 debt reduction and risk management (Standard & Poor's: Industry Report Card: U.S.  
19 Electric/Water/Gas, January 4, 2005).

20 In 2006, S&P confirmed the stable credit quality of the industry, which is  
21 expected to continue in the future despite increasing capital spending. Further, the  
22 industry focus on strengthening its balance sheet by divesting non-core business  
23 operations has improved utilities' ability to withstand the pressure of substantial

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<sup>1</sup> S&P Utilities & Perspectives, Global Utilities Rating Service, October 14, 2002.

1 capital expenditures. (Standard & Poor's: Industry Report Card, January 12, 2007). In  
2 the second quarter of 2007, S&P identified the principal drivers of credit upgrades to  
3 be improving financial conditions, due to significant debt reduction, stronger free cash  
4 flow, cost reductions, regulatory support and reduced business risk (Standard &  
5 Poor's Industry Survey, Electric Utilities, August 9, 2007 at 6).

6 **RMP Risk Factors**

7 **Q WHAT IS THE RELATIONSHIP BETWEEN RMP AND PACIFICORP?**

8 A Rocky Mountain Power is a division of PacifiCorp. PacifiCorp is a wholly owned  
9 subsidiary of MidAmerican Energy Holdings Company (MEHC). PacifiCorp operates  
10 utilities in Oregon, Washington and California as Pacific Power. PacifiCorp's utility  
11 operations in Utah, Wyoming and Idaho operate as Rocky Mountain Power (RMP).

12 **Q PLEASE PROVIDE AN OVERVIEW OF PACIFICORP'S INVESTMENT RISK.**

13 A PacifiCorp has a business profile score of '5' and an investment bond rating of "A-"  
14 from S&P and "A3" from Moody's. The majority of the U.S. electric utility companies  
15 have a credit rating of "BBB".<sup>2</sup> PacifiCorp's bond rating is two notches above the  
16 industry average. For integrated utility companies, S&P's business profile scores  
17 typically fall within the range of '4' to '6'.<sup>3</sup> PacifiCorp's business profile score of '5' is  
18 comparable to the risk of a typical integrated electric utility company.

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<sup>2</sup> Standard & Poor's Ratings Direct: Pace of U.S. Utility Rating Activity Moderated in 2006. January 23, 2007.

<sup>3</sup>Standard & Poor's: New Business Profile Score Assigned for U.S. Utility and Power Companies; Financial Guidelines Revised, June 2, 2004, Chart 4.

1   **Q     IS PACIFICORP'S CREDIT QUALITY IMPACTED BY ITS PARENT COMPANY?**

2   **A     PacifiCorp's affiliation with its parent and other subsidiaries impacts its credit quality**  
3         because S&P determines PacifiCorp's credit rating on a consolidated basis with its  
4         parent and affiliated companies. S&P stated as follows:

5             The 'A-' corporate credit rating on PacifiCorp reflects MEHC's  
6             consolidated credit profile. The rating incorporates MEHC's strong  
7             business risk position, fairly aggressive financial profile, and both  
8             explicit and implicit support from Berkshire Hathaway.

9             MEHC owns PacifiCorp through PPW Holdings LLC, a special-purpose  
10            entity that ring-fences PacifiCorp from MEHC as required by the  
11            Oregon Public Utilities Commission. The ring-fencing includes  
12            structural protections, covenants, a pledge of stock, and an  
13            independent director. PacifiCorp also agreed to refrain from making  
14            dividends to MEHC unless it maintains a common equity ratio of  
15            48.25% through 2008, decreasing annually to 44% by 2012. These  
16            factors serve to protect PPW Holdings LLC and PacifiCorp from an  
17            MEHC bankruptcy. Due to the ring-fencing, PacifiCorp's corporate  
18            credit rating could potentially be as high as three notches above  
19            MEHC's rating, provided its stand-alone credit quality supported such  
20            an elevation. Currently, the utility's stand-alone credit metrics are in  
21            the 'BBB' category and do not warrant a rating above MEHC's.<sup>4</sup>

22            As such, PacifiCorp's bond rating is reasonably protected from MEHC through  
23            constructive ring-fence protections. Nevertheless, MEHC's financial position and  
24            investment risk can impact PacifiCorp's corporate credit rating and financial integrity.  
25            As such, the Commission should be concerned about the impact on PacifiCorp's  
26            ability to attract capital under reasonable terms and conditions due to unsuccessful or  
27            failed investments at MEHC, including acquisitions that may create undue financial  
28            distress on the parent company. However, at this time, MEHC does not appear to be  
29            creating any negative credit rating implications on PacifiCorp.

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<sup>4</sup> Standard & Poor's: PacifiCorp's \$600 Million Bonds Rated "A-", March 14, 2007.

1 **Projected Interest Rates and Capital Market Costs**

2 **Q SHOULD THE COMMISSION PLACE HEAVY RELIANCE ON PROJECTED**  
3 **INTEREST RATES AND FUTURE CAPITAL MARKET COSTS RELATIVE TO**  
4 **TODAY'S OBSERVABLE CAPITAL MARKET COSTS?**

5 A No. While projected interest rates should be given some consideration, the  
6 determination of RMP's cost of capital today should be based primarily on observable  
7 and verifiable actual current market costs. This is appropriate because projected  
8 changes to interest rates are highly uncertain and their accuracy is at best  
9 problematic. Indeed, this is clearly evident by a review of projected changes to  
10 interest rates made over the last five years, in comparison to how accurate these  
11 projections turned out to be. This analysis clearly illustrates that observable interest  
12 rates today are as accurate as are economists' consensus projections of future  
13 interest rates.

14 An analysis supporting this conclusion is illustrated on Exhibit 221 (MPG-8).  
15 On this exhibit, under Columns 1 and 2, I show the actual market yield at the time a  
16 projection is made for Treasury bond yields two years in the future. In Column 1, I  
17 show the actual Treasury yield and, in Column 2, I show the projected yield two years  
18 out. As shown in Columns 1 and 2, over the last five years, Treasury yields were  
19 projected to increase relative to the actual Treasury yields at the time of the  
20 projection. In Column 4, I show what the Treasury yield actually turned out to be two  
21 years after the forecast. Under Column 5, I show the actual yield change at the time  
22 of the projections relative to the projected yield change.

23 As shown on this exhibit, over the last five years, economists have been  
24 consistently projecting increases to interest rates. However, as demonstrated under  
25 Column 5, those yield projections have turned out to be overstated in virtually every



1 case. Indeed, actual Treasury yields have decreased or remained flat over the last  
2 five years, rather than increase as the economists' projections indicated.

3 This review of the experience with projected interest rates clearly illustrates  
4 that interest rate projection accuracy is highly problematic. Indeed, current  
5 observable interest rates are just as likely a reasonable projection of future interest  
6 rates as are economists' projections. Accordingly, while I will use projected interest  
7 rates to provide some sense of the market's expectations of future capital market  
8 costs, I will not use them exclusively. Rather, my analyses will be based on the  
9 combination of current observable interest rates and projected interest rates. Thus,  
10 my analyses will capture a return on equity range reflecting a broad range of potential  
11 actual capital market costs during the period rates determined in this proceeding will  
12 be in effect.

13 **Q ARE THERE OTHER REASONS NOT TO RELY EXCLUSIVELY ON UNCERTAIN**  
14 **PROJECTED INCREASES TO INTEREST RATES?**

15 **A** Yes. The ratemaking process itself provides utilities protection against the increasing  
16 cost of capital. Indeed, if RMP's rate of return is set based on today's market cost of  
17 capital, and capital costs increase in the future, then RMP is free to file for a rate  
18 change to reflect higher capital costs in the future when, or if, costs change. Hence,  
19 the regulatory mechanism itself provides utilities a hedge against increasing capital  
20 costs. Depriving ratepayers of today's low cost capital market environment is  
21 prejudicial and unreasonably tilts the regulatory balance in favor of investors.

1 **RMP's Proposed Capital Structure**

2 Q WHAT CAPITAL STRUCTURE IS THE COMPANY REQUESTING TO USE TO  
3 DEVELOP ITS OVERALL RATE OF RETURN FOR ELECTRIC OPERATIONS IN  
4 THIS PROCEEDING?

5 A RMP's proposed capital structure, as supported by Mr. Bruce N. Williams, is shown  
6 below in Table 1.

<u>Description</u>	<u>Percent of Total Capital</u>
Long-Term Debt	49.1%
Preferred Stock	0.5%
Common Equity	<u>50.4%</u>
Total Regulatory Capital Structure	100.0%

Source: Williams Direct at 3.

7 Q ARE YOU PROPOSING ANY ADJUSTMENTS TO MR. WILLIAMS'  
8 RECOMMENDED CAPITAL STRUCTURE TO SET RMP'S OVERALL RATE OF  
9 RETURN IN THIS PROCEEDING?

10 A No. The proposed capital structure represents the Company's pro forma capital  
11 structure as of December 31, 2007, which is reasonably comparable to RMP's actual  
12 capital structure in 2006.

1 Q WHAT OVERALL RATE OF RETURN DO YOU RECOMMEND FOR RMP IN THIS  
2 PROCEEDING?

3 A As shown on Exhibit 222 (MPG-9), based on my proposed return on equity and  
4 RMP's proposed capital structure, I recommend the Commission set RMP's overall  
5 rate of return at 8.14%.

6 **Return on Common Equity**

7 Q PLEASE DESCRIBE THE FRAMEWORK FOR DETERMINING A REGULATED  
8 UTILITY'S COST OF COMMON EQUITY.

9 A In general, determining a fair cost of common equity for a regulated utility has been  
10 framed by two decisions of the U.S. Supreme Court, in Bluefield Water Works &  
11 Improvement Co. v. Public Serv. Comm'n of West Virginia, 26 U.S. 679 (1923) and  
12 Federal Power Comm'n v. Hope Natural Gas Co., 320 U.S. 591 (1944).

13 These decisions identify the general standards to be considered in  
14 establishing the cost of common equity for a public utility. Those general standards  
15 are that the authorized return should: (1) be sufficient to maintain financial integrity;  
16 (2) attract capital under reasonable terms; and (3) be commensurate with returns  
17 investors could earn by investing in other enterprises of comparable risk.

18 Q PLEASE DESCRIBE WHAT IS MEANT BY "UTILITY'S COST OF COMMON  
19 EQUITY."

20 A A utility's cost of common equity is the return investors expect, or require, in order to  
21 make an investment. Investors expect to achieve their return requirement from  
22 receiving dividends and stock price appreciation.

1 **Q PLEASE DESCRIBE THE METHODS YOU HAVE USED TO ESTIMATE THE COST**  
2 **OF COMMON EQUITY FOR RMP.**

3 A I have used several models based on financial theory to estimate RMP's cost of  
4 common equity. These models are: (1) a constant growth Discounted Cash Flow  
5 (DCF) model, (2) a two-stage growth DCF model, (3) a Risk Premium (RP) model,  
6 and (4) a Capital Asset Pricing Model (CAPM). I have applied these models to a  
7 group of publicly traded utilities that I have determined represent the investment risk  
8 of RMP.

9 **Q PLEASE DESCRIBE THE PROXY GROUP YOU USED TO ESTIMATE RMP'S**  
10 **RETURN ON EQUITY IN THIS PROCEEDING.**

11 A I relied on the same risk proxy group used by RMP witness, Dr. Samuel Hadaway.

12 **Q HOW DOES THIS PROXY GROUP RISK COMPARE TO RMP?**

13 A My proposed proxy group is shown on Exhibit 223 (MPG-10). My proxy group has an  
14 average bond rating from S&P and Moody's of "A-" and "A2," respectively. My proxy  
15 group average bond ratings are reasonably comparable to RMP's credit ratings from  
16 S&P and Moody's of "A-" and "A3," respectively.

17 My proxy group has an average common equity ratio of 51% from Value Line  
18 and 47% from AUS. In comparison, RMP's requested common equity ratio is 50%,  
19 which is approximately identical to the Company's actual common equity ratio. As  
20 such, my proxy group has reasonably comparable financial risk to RMP.

21 Finally, my proxy group has a S&P's business profile score of '4' compared to  
22 RMP score of '5'. This S&P business profile score indicates the proxy group has  
23 slightly lower business risk than RMP, albeit comparable. Hence, my proxy group

1 has comparable business and financial risks to RMP. Based on this assessment, I  
2 believe my proxy group has reasonably comparable investment risk to RMP.

3 **Discounted Cash Flow Model**

4 **Q PLEASE DESCRIBE THE DCF MODEL.**

5 A The DCF model posits that a stock price is valued by summing the present value of  
6 expected future cash flows discounted at the investor's required rate of return (ROR)  
7 or cost of capital. This model is expressed mathematically as follows:

8 
$$P_0 = \frac{D_1}{(1+K)^1} + \frac{D_2}{(1+K)^2} + \dots + \frac{D_\infty}{(1+K)^\infty} \quad \text{where} \quad \text{(Equation 1)}$$

9  $P_0$  = Current stock price  
10  $D$  = Dividends in periods 1 -  $\infty$   
11  $K$  = Investor's required return

12 This model can be rearranged in order to estimate the discount rate or  
13 investor required return, "K." If it is reasonable to assume that earnings and  
14 dividends will grow at a constant rate, then Equation 1 can be rearranged as follows:

15 
$$K = D_1/P_0 + G \quad \text{(Equation 2)}$$

16  $K$  = Investor's required return  
17  $D_1$  = Dividend in first year  
18  $P_0$  = Current stock price  
19  $G$  = Expected constant dividend growth rate

20 Equation 2 is referred to as the annual "constant growth" DCF model.

21 **Q PLEASE DESCRIBE THE INPUTS TO YOUR CONSTANT GROWTH DCF MODEL.**

22 A As shown under Equation 2 above, the DCF model requires a current stock price,  
23 expected dividend, and expected growth rate in dividends.

1 **Q WHAT STOCK PRICE AND DIVIDEND HAVE YOU RELIED ON IN YOUR**  
2 **CONSTANT GROWTH DCF MODEL?**

3 A I relied on the average of the weekly high and low stock prices over a 13-week period  
4 ended September 7, 2007. An average stock price is less susceptible to market price  
5 variations than is a spot price. Therefore, an average stock price is less susceptible  
6 to aberrant market price movements, which may not be reflective of the stock's long-  
7 term value.

8 A 13-week average stock price is short enough to contain data that  
9 reasonably reflects current market expectations, but is not too short a period to be  
10 susceptible to market price variations that may not be reflective of the security's long-  
11 term value. Therefore, in my judgment, a 13-week average stock price is a  
12 reasonable balance between the need to reflect current market expectations and to  
13 capture sufficient data to smooth out aberrant market movements.

14 I used the most recently paid quarterly dividend, as reported in the Value Line  
15 Investment Survey. This dividend was annualized (multiplied by 4) and adjusted for  
16 next year's growth to produce the D1 factor for use in Equation 2 above.

17 **Q WHAT DIVIDEND GROWTH RATES HAVE YOU USED IN YOUR CONSTANT**  
18 **GROWTH DCF MODEL?**

19 A There are several methods one can use in order to estimate the expected growth in  
20 dividends. However, for purposes of determining the market required return on  
21 common equity, one must attempt to estimate investors' consensus about what the  
22 dividend or earnings growth rate will be, and not what an individual investor or analyst  
23 may use to form individual investment decisions.

1 Security analysts' growth estimates have been shown to be more accurate  
2 predictors of future returns than growth rates derived from historical data<sup>5</sup> because  
3 they are more reliable estimates, and assuming the market generally makes rational  
4 investment decisions, analysts' growth projections are the most likely growth  
5 estimates considered by the market that influence observable stock prices.

6 For my constant growth DCF analysis, I have relied on a consensus, or mean,  
7 of professional security analysts' earnings growth estimates as a proxy for the  
8 investor consensus dividend growth rate expectations. I used the average of three  
9 sources of ratepayer growth rate estimates: Zack's, Reuters, and SNL Financial. All  
10 consensus analyst projections used were available on September 13, 2007, as  
11 reported on-line.

12 Each consensus growth rate projection is based on a survey of security  
13 analysts. The consensus estimate is a simple arithmetic average, or mean, of  
14 surveyed analysts' earnings growth forecasts. A simple average of the growth  
15 forecasts gives equal weight to all surveyed analysts' projections. It is problematic as  
16 to whether any particular analyst's forecast is most representative of general market  
17 expectations. Therefore, a simple average, or arithmetic mean, analyst forecast is a  
18 good proxy for market consensus expectations. The growth rates I used in my DCF  
19 analysis are shown on Exhibit 224 (MPG-11).

20 **Q WHAT ARE THE RESULTS OF YOUR CONSTANT GROWTH DCF MODEL?**

21 A As shown on Exhibit 225 (MPG-12), the constant growth DCF return for my  
22 comparable group is 10.0%.

---

<sup>5</sup> See e.g., David Gordon, Myron Gordon, and Lawrence Gould, "Choice Among Methods of Estimating Share Yield," The Journal of Portfolio Management, Spring 1989.

1 Q DO YOU HAVE ANY COMMENTS CONCERNING THE RESULTS OF YOUR  
2 CONSTANT GROWTH DCF ANALYSIS?

3 A Yes. The average three- to five-year growth rate for my comparable group is 5.54%.  
4 This growth rate is slightly above the rational estimate of long-term sustainable  
5 growth.

6 Q WHY DO YOU BELIEVE THE PROXY GROUP'S THREE- TO FIVE-YEAR  
7 GROWTH RATE IS NOT A RATIONAL ESTIMATE OF LONG-TERM  
8 SUSTAINABLE GROWTH?

9 A The proxy group's three- to five-year growth rate exceeds the growth rate of the  
10 overall U.S. economy. Based on consensus economic projections, as published by  
11 Blue Chip Economic Indicators, the five and ten-year GDP growth is estimated at a  
12 nominal rate of 5.1%.<sup>6</sup> A company cannot grow, indefinitely, at a faster rate than the  
13 market in which it sells its products. The U.S. economy, or GDP, growth projection  
14 represents a ceiling, or high end, sustainable growth rate for a utility over an indefinite  
15 period of time.

16 Utilities cannot sustain a growth rate that exceeds the growth rate of the  
17 overall economy, because utilities' earnings/dividend growth is created by increased  
18 utility investment, which in turn is driven by service area economic growth. In other  
19 words, utilities invest in plant to meet sales demand growth, and sales growth in turn  
20 is tied to economic growth in their service areas. Hence, nominal GDP growth is a  
21 proxy for sales growth, utility rate base growth, and earnings growth. Therefore, GDP  
22 growth is the highest sustainable long-term growth rate of a utility.

---

<sup>6</sup> Blue Chip Economic Indicators, March 10, 2007 at 15.



1           Moreover, the proxy group's projected growth rate of 5.54% is higher than the  
2 historical growth rates the proxy group has achieved over the last five to ten years,  
3 and that is projected over the next three to five years. As shown on Exhibit 226  
4 (MPG-13), the historical growth of my proxy group's dividend is substantially lower  
5 than the nominal GDP growth, and actually less than the projected inflation growth.  
6 Importantly, this growth rate exceeds the projected growth of inflation and the  
7 projected growth of nominal GDP. Therefore, this growth rate estimate does not  
8 reflect investors' rational expectations.

9           Further, the current and projected payout ratios of my group are 72% and  
10 64%, respectively. This indicates utilities are retaining a large percentage of their  
11 earnings, which will help support future growth through earnings and dividends.

12           Finally, the current and projected dividend-to-book ratios of my comparable  
13 utility group are both 7.2%. This indicates that the dividend is affordable in today's  
14 low-cost capital market environment, and utilities could support that dividend at an  
15 authorized return on equity well under 10% and still retain adequate earnings to fund  
16 future growth.

17 **Q   WHY DO YOU BELIEVE GROWTH RATES FOR ELECTRIC UTILITY COMPANIES**  
18 **ARE PROJECTED TO BE HIGHER OVER THE NEXT THREE TO FIVE YEARS?**

19 **A**   Electric utility companies are in the midst of major construction programs, which are  
20 significantly increasing their outstanding capital and net plant investment. In fact, in  
21 the fourth quarter 2006, the Edison Electric Institute (EEI), a utility company trade  
22 organization, published a financial update for electric utilities. A portion of the  
23 highlights identified by EEI is as follows:

1 ■ Shareholder-owned electric utilities brought 5,857 MW of new  
2 capacity online in 2006, 42% less than in 2005. Natural gas  
3 generation has dropped from 98% of new plant construction in 2002 to  
4 64% in 2006. In contrast, wind has increased from 1% to 32% over  
5 the same time period.

6 ■ With reserve margins shrinking in several key regional electricity  
7 markets and nationwide power demand growing steadily, the industry  
8 is now planning a new round of plant construction. Announced new  
9 capacity additions totaled 33,998 MW in 2006, surpassing the total for  
10 each of the last four years, and over twice that of 2005.

11 ■ EEI survey results indicate that the industry is planning to invest  
12 \$31.5 billion in the transmission system from 2006-2009, a 58%  
13 increase over the amount invested from 2002-2005. Transmission  
14 investment in 2005 totaled \$5.8 billion, an 18% increase over the  
15 \$4.9 billion invested in 2004. (EEI, Construction, Q4 2006 Financial  
16 Update).

17 In the second quarter of 2007, EEI confirmed the large capital expenditure  
18 programs undertaken by U.S. utilities.

19 U.S. electricity demand is growing slowly but steadily and the utility industry is  
20 in the early stages of a sizeable long-term capital investment cycle that includes rising  
21 spending on emissions control equipment, transmission and distribution upgrades  
22 and, over the longer term, a new round of baseload generation. Much of this will  
23 likely be built in rate base.

24 EEI's recent construction survey shows that industry-wide capital spending is  
25 set to rise from \$48.4 billion in 2005 to \$73.1 billion in 2007, a 51.1% increase. And  
26 Wall Street analysts forecast strong investment by the industry beyond the end of the  
27 decade. The prospect of carbon regulation adds to the potential longevity of the  
28 current build cycle, should carbon capture and sequestration become the most  
29 economically viable way of complying with future carbon limits.

30 Thus, the projected increase in utility earnings and dividend paying ability is  
31 not a sustainable trend, but rather is the result of an abnormally high period of

1 industry construction expenditures. Once generation reserve margins are increased  
2 to or above target levels, transmission capacity investments are made to alleviate  
3 transmission constraints and environmental upgrades are complete, it is reasonable  
4 to expect that capital expenditures by utilities will decline to a more normal and  
5 sustainable growth level. This will cause utility earnings also to drop to a sustainable  
6 growth level.

7 EEI's assessment supports the use of a two-stage growth DCF model in this  
8 case, because three- to five-year earnings growth projections will be unsustainably  
9 high after the current abnormally high construction expenditure period comes to an  
10 end.

11 **Q SINCE YOU HAVE CONCLUDED THAT THE GROWTH RATES USED IN YOUR**  
12 **CONSTANT GROWTH DCF MODEL ARE SLIGHTLY HIGHER THAN THE**  
13 **LONG-TERM SUSTAINABLE GROWTH, DO YOU BELIEVE THAT THE RESULT**  
14 **OF YOUR CONSTANT GROWTH DCF MODEL FOR YOUR PROXY GROUP IS**  
15 **REASONABLE?**

16 **A** Yes, the result of my constant growth DCF model is reasonable albeit high, because  
17 the growth rate used in this study is slightly higher than the maximum sustainable  
18 growth rate of 5.1%. However, my constant growth DCF is based on consensus  
19 analysts' growth rate projections, so it is a reasonable reflection of rational investment  
20 expectations over the next three to five years. The limitation on the constant growth  
21 DCF model is that it cannot reflect a rational expectation that a period of high/low  
22 short-term growth can be followed by a change in growth to a rate that is more  
23 reflective of long-term sustainable growth. Hence, I will perform a two-stage DCF  
24 analysis to reflect this outlook of changing growth expectations.

1 **Two-Stage DCF Model**

2 **Q WHY DO YOU PROPOSE TO USE A TWO-STAGE DCF MODEL TO TEST THE**  
3 **RESULTS OF YOUR CONSTANT GROWTH DCF STUDY?**

4 A I propose to use a two-stage DCF model because the growth rates used in my  
5 constant growth model are higher than a reasonable estimate of long-term  
6 sustainable growth. As noted above, utilities cannot grow faster than the economies  
7 in which they sell their services. Historically, utility sales have grown at a rate that  
8 trails the growth in the overall U.S. economy.

9 As such, a two-stage DCF model can capture the expectation of abnormally  
10 high growth over the next five years, followed by a decline of long-term sustainable  
11 growth.

12 **Q PLEASE DESCRIBE YOUR TWO-STAGE DCF MODEL.**

13 A The two-stage DCF growth model reflects the possibility of non-constant growth to a  
14 company over time. The two-stage model reflects two growth periods: (1) a short-  
15 term growth period, which consists of the first five years; and (2) a long-term growth  
16 period, which consists of each year starting in year six through perpetuity. For the  
17 short-term growth period, I relied on the consensus analysts' growth projections  
18 described above in relationship to my constant growth DCF model. For the long-term  
19 growth period, I assumed each company's growth would increase toward the  
20 maximum sustainable growth rate for a utility company as proxied by the consensus  
21 analysts' projected growth for the U.S. GDP.

1   **Q     WHAT STOCK PRICE AND DIVIDEND DID YOU USE IN YOUR TWO-STAGE DCF**  
2   **ANALYSIS?**

3   **A**    I relied on the same 13-week stock price, the most recent quarterly dividend payment,  
4           and consensus analysts' growth rate projections discussed above in my constant  
5           growth DCF model. For the long-term sustainable growth rate starting in year six, I  
6           used the consensus economists' five to ten-year projected nominal GDP growth rate  
7           of 5.1%.

8   **Q     WHAT ARE THE RESULTS OF YOUR TWO-STAGE GROWTH DCF MODEL?**

9   **A**    As shown on Exhibit 227 (MPG-14), the DCF return on equity for my proxy group is  
10           9.6%.

11   **Risk Premium Model**

12   **Q     PLEASE DESCRIBE YOUR BOND YIELD PLUS RISK PREMIUM MODEL.**

13   **A**    This model is based on the principle that investors require a higher ROR to assume  
14           greater risk. Common equity investments have greater risk than bonds because  
15           bonds have more security of payment in bankruptcy proceedings than common  
16           equity and the coupon payments on bonds represent contractual obligations. In  
17           contrast, companies are not required to pay dividends on common equity, or to  
18           guarantee returns on common equity investments. Therefore, common equity  
19           securities are considered to be more risky than bond securities.

20                 This risk premium model is based on two estimates of an equity risk premium.  
21                 First, I estimated the difference between the required return on utility common equity  
22                 investments and Treasury bonds. The difference between the required return on  
23                 common equity and the bond yield is the risk premium. I estimated the risk premium

1 on an annual basis for each year over the period 1986 through June 2007. The  
2 common equity required returns were based on regulatory commission-authorized  
3 returns for electric utility companies. Authorized returns are typically based on expert  
4 witnesses' estimates of the contemporary investor required return.

5 The second equity risk premium method is based on the difference between  
6 regulatory commission-authorized returns on common equity and contemporary  
7 A-rated utility bond yields. This time period was selected because over the period  
8 1986 through June 2007, public utility bond yields have consistently traded at a  
9 premium to book value. This is illustrated on Exhibit 228 (MPG-15), where the  
10 market to book ratio since 1986 for the electric utility industry was consistently above  
11 1.0. Therefore, over this time period, regulatory authorized returns were sufficient to  
12 support market prices that at least exceeded book value. This is an indication that  
13 regulatory authorized returns on common equity supported a utility's ability to issue  
14 additional common stock, without diluting existing shares. This is an indication that  
15 utilities were able to access equity markets without a detrimental impact on current  
16 shareholders.

17 Based on this analysis, as shown on Exhibit 229 (MPG-16), the average  
18 indicated equity risk premium of authorized electric utility common equity returns over  
19 U.S. Treasury bond yields has been 5.04%. Of the 22 observations, 18 indicated risk  
20 premiums fall in the range of 4.4% to 5.9%. Since the risk premium can vary  
21 depending upon market conditions and changing investor risk perceptions, I believe  
22 using an estimated range of risk premiums provides the best method to measure the  
23 current return on common equity using this methodology.

24 As shown on Exhibit 230 (MPG-17), the average indicated authorized electric  
25 utility common equity return over contemporary Moody's utility bond yields was 3.67%

1 over the period 1986 through June 2007. The equity risk premium estimates based  
2 on this analysis primarily fall in the range of 3.0% to 4.4% over this time period.

3 **Q BASED ON HISTORICAL DATA, WHAT RISK PREMIUM HAVE YOU USED TO**  
4 **ESTIMATE RMP'S COST OF EQUITY IN THIS PROCEEDING?**

5 A The equity risk premium should reflect the relative market perception of risk in the  
6 utility industry today. I have gauged investor perceptions in utility risk today on  
7 Exhibit 231 (MPG-18). On that exhibit, I show the yield spread between utility bonds  
8 and Treasury bonds over the last 27 years. As shown on this exhibit, the 2007 utility  
9 bond yield spreads over Treasury bonds for "A" rated and "Baa" rated utility bonds  
10 are 1.11% and 1.34%, respectively. These utility bond yield spreads over Treasury  
11 bond yields are among the lowest yield spreads in the last 27 years, and are below  
12 the 27-year average "A" and "Baa" yield spreads of 1.56% and 1.92%, respectively.  
13 Hence, this comparison of utility bond yield spreads indicates the market perception  
14 of utility risk to be below the average industry risk over this historical time period.

15 Recognizing the robust nature and the current market's low-risk valuation of  
16 utility investments, I believe it is appropriate to use an average market equity risk  
17 premium to estimate the current market-required return on equity. Hence, I relied on  
18 a Treasury bond risk premium of 5.2% (midpoint of the 4.4% to 5.9% range), and an  
19 equity risk premium over utility bond yields of 3.7% (midpoint of the 3.0% to 4.4%  
20 range), as described above.

1 Q HOW DID YOU ESTIMATE RMP'S COST OF COMMON EQUITY WITH THIS  
2 MODEL?

3 A I added a projected long-term Treasury bond yield to my estimated equity risk  
4 premium over Treasury yields. Blue Chip Financial Forecasts projects the 30-year  
5 Treasury bond yields to be 5.2%, and a 10-year Treasury bond to be 5.0% (Blue Chip  
6 Financial Forecast, September 1, 2007 at 2). Using the projected 30-year bond yield  
7 of 5.2%, and a Treasury bond risk premium of 4.4% to 5.9%, produces an estimated  
8 common equity return in the range of 9.6% to 11.1%, with a midpoint estimate of  
9 10.4%.

10 I next added my equity risk premium over utility bond yields to a current  
11 13-week average yield on "A" rated utility bonds for the period ending September 7,  
12 2007 of 6.25%. This current "A" utility bond yield is developed on Exhibit 232  
13 (MPG-19). Adding the utility equity risk premium of 3.0% to 4.4% to a "A" rated bond  
14 yield of 6.25%, produces a cost of equity in the range of 9.3% to 10.7%, with a  
15 midpoint of 10.0%.

16 My risk premium analyses produce a return estimate in the range of 10.0% to  
17 10.4%, with a midpoint estimate of 10.2%.

18 **Capital Asset Pricing Model**

19 Q PLEASE DESCRIBE THE CAPM.

20 A The CAPM method of analysis is based upon the theory that the market required rate  
21 of return (ROR) for a security is equal to the risk-free ROR, plus a risk premium  
22 associated with the specific security. This relationship between risk and return can be  
23 expressed mathematically as follows:



1                     $R_i = R_f + B_i \times (R_m - R_f)$  where:

2                     $R_i =$  Required return for stock i  
3                     $R_f =$  Risk-free rate  
4                     $R_m =$  Expected return for the market portfolio  
5                     $B_i =$  Beta - Measure of the risk for stock

6                    The stock-specific risk term in the above equation is beta. Beta represents the  
7                    investment risk that cannot be diversified away when the security is held in a  
8                    diversified portfolio. When stocks are held in a diversified portfolio, firm-specific risks  
9                    can be eliminated by balancing the portfolio with securities that react in the opposite  
10                    direction to firm-specific risk factors (e.g., business cycle, competition, product mix  
11                    and production limitations).

12                    The risks that cannot be eliminated when held in a diversified portfolio are  
13                    nondiversifiable risks. Nondiversifiable risks are related to the market in general and  
14                    are referred to as systematic risks. Risks that can be eliminated by diversification are  
15                    regarded as nonsystematic risks. In a broad sense, systematic risks are market risks,  
16                    and nonsystematic risks are business risks. The CAPM theory suggests that the  
17                    market will not compensate investors for assuming risks that can be diversified away.  
18                    Therefore, the only risk that investors will be compensated for are systematic or  
19                    nondiversifiable risks. The beta is a measure of the systematic or nondiversifiable  
20                    risks.

21    **Q    PLEASE DESCRIBE THE INPUTS TO YOUR CAPM.**

22    **A    The CAPM requires an estimate of the market risk-free rate, the company's beta, and**  
23                    the market risk premium.

1 **Q WHAT DID YOU USE AS AN ESTIMATE OF THE MARKET RISK-FREE RATE?**

2 A The Blue Chip Financial Forecasts' projected 30-year Treasury bond yield is 5.2%.  
3 The current 30-year bond yield is 5.0% (Blue Chip Financial Forecast, September 1,  
4 2007 at 2). I used the Blue Chip Financial Forecasts' projected 30-year Treasury  
5 bond yield of 5.2% for my CAPM analysis.

6 **Q WHY DID YOU USE LONG-TERM TREASURY BOND YIELDS AS AN ESTIMATE**  
7 **OF THE RISK-FREE RATE?**

8 A Treasury securities are backed by the full faith and credit of the United States  
9 government. Therefore, long-term Treasury bonds are considered to have negligible  
10 credit risk. Also, long-term Treasury bonds have an investment horizon similar to that  
11 of common stock. As a result, investor-anticipated long-run inflation expectations are  
12 reflected in both common stock required returns and long-term bond yields.  
13 Therefore, the nominal risk-free rate (or expected inflation rate and real risk-free rate)  
14 included in a long-term bond yield is a reasonable estimate of the nominal risk-free  
15 rate included in common stock returns.

16 Treasury bond yields, however, do include risk premiums related to  
17 unanticipated future inflation and interest rates. Therefore, a Treasury bond yield is  
18 not a risk-free rate. Risk premiums related to unanticipated inflation and interest rates  
19 are systematic or market risks. Consequently, for companies with betas less than  
20 1.0, using the Treasury bond yield as a proxy for the risk-free rate in the CAPM  
21 analysis can produce an overstated estimate of the CAPM return.

1 Q WHAT BETA DID YOU USE IN YOUR ANALYSIS?

2 A As shown on Exhibit 233 (MPG-20), my proxy group average and median Value Line  
3 beta estimates are 0.86 and 0.85, respectively. Based on this data, I will use a beta  
4 of 0.85 for my CAPM analysis.

5 Q DO YOU RECOMMEND A CAREFUL CONSIDERATION OF A UTILITY BETA FOR  
6 USE IN A CAPM STUDY?

7 A Yes. Utility betas have been increasing over the last five years, as shown on  
8 Exhibit 233 (MPG-20), largely because electric utility stocks have outperformed the  
9 overall market. While this increasing beta gives the impression of increasing risk, that  
10 interpretation is incorrect.

11 Indeed, electric utility risk factors have been decreasing as these companies  
12 revert to a back-to-basics investment strategy that lowers their operating risks, and  
13 they have been divesting non-regulated businesses to reduce debt and strengthen  
14 balance sheets, which is lowering risk. Value Line notes this in a recent review of the  
15 electric utility industry. Value Line states as follows:

16 **Better Finances**

17 This decade, utilities have distanced themselves from risky  
18 unregulated business forays, including commodities  
19 trading, foreign energy operations, water services and  
20 aircraft leasing. Currently, *Dominion Resources* plans to  
21 sell its oil and gas production business, *Duke* is spinning  
22 its mid-stream gas operations to shareholders, *Northeast*  
23 *Utilities* is divesting its merchant power generation  
24 business, and *Progress Energy* is shedding power plant  
25 and natural gas assets. Such actions have improved  
26 earnings performance and strengthened capital ratios.  
27 Companies are targeting a nearly equal weighting of debt  
28 and equity on their balance sheets, a goal that should be  
29 met by 2009-2011.

30 Revenue-backed and tax-exempt bonds will provide  
31 economical funding for planned capital improvements.