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IDAHO PUBLIC
UTILITIES COMMISSION

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

**IN THE MATTER OF THE)
APPLICATION OF ROCKY)
MOUNTAIN POWER FOR)
APPROVAL OF CHANGES TO ITS)
ELECTRIC SERVICE SCHEDULES)
AND A PRICE INCREASE OF \$5.9)
MILLION, OR 4.0 PERCENT)**

CASE NO. PAC-E-08-07

Direct Testimony of Samuel C. Hadaway

ROCKY MOUNTAIN POWER

CASE NO. PAC-E-08-07

September 2008

1 **Introduction and Qualifications**

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

3 A. My name is Samuel C. Hadaway. I am a Principal in FINANCO, Inc., Financial
4 Analysis Consultants, 3520 Executive Center Drive, Austin, Texas 78731.

5 **Q. On whose behalf are you testifying?**

6 A. I am testifying on behalf of Rocky Mountain Power (hereinafter the Company).

7 **Q. Please state your educational background and describe your professional
8 training and experience.**

9 A. I have a Bachelor's degree in economics from Southern Methodist University, as
10 well as MBA and Ph.D. degrees with concentrations in finance and economics
11 from the University of Texas at Austin (UT Austin). For the past 25 years, I have
12 been an owner and full-time employee of FINANCO, Inc. FINANCO provides
13 financial research concerning the cost of capital and financial condition for
14 regulated companies as well as financial modeling and other economic studies in
15 litigation support. In addition to my work at FINANCO, I have served as an
16 adjunct professor in the McCombs School of Business at UT Austin and in what
17 is now the McCoy College of Business at Texas State University. In my prior
18 academic work, I taught economics and finance courses and I conducted research
19 and directed graduate students in the areas of investments and capital market
20 research. I was previously Director of the Economic Research Division at the
21 Public Utility Commission of Texas where I supervised the Commission's
22 finance, economics, and accounting staff, and served as the Commission's chief
23 financial witness in electric and telephone rate cases. I have taught courses at

1 various utility conferences on cost of capital, capital structure, utility financial
2 condition, and cost allocation and rate design issues. I have made presentations
3 before the New York Society of Security Analysts, the National Rate of Return
4 Analysts Forum, and various other professional and legislative groups. I have
5 served as a vice president and on the board of directors of the Financial
6 Management Association.

7 A list of my publications and testimony I have given before various
8 regulatory bodies and in state and federal courts is contained in my resume, which
9 is included as Appendix A.

10 **Purpose and Summary of Testimony**

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

12 A. The purpose of my testimony is to estimate the market required rate of return on
13 equity capital (ROE) for Rocky Mountain Power.

14 **Q. Please state your ROE recommendation and summarize the results of your
15 cost of equity studies.**

16 A. I estimate the cost of equity for Rocky Mountain Power to be 10.75 percent. My
17 discounted cash flow (DCF) analysis indicates an ROE range of 10.6 percent to
18 10.9 percent. My risk premium analysis indicates an ROE of 10.85 percent, with
19 other risk premium data indicating ROEs above 11.0 percent. Based on these
20 quantitative results and my further review of other economic data, I recommend a
21 point ROE estimate of 10.75 percent.

22 **Q. How is your analysis structured?**

23 In my DCF analysis, I apply a comparable company approach. Rocky Mountain

1 Power's cost of equity cannot be estimated directly from its own market data
2 because Rocky Mountain Power is a division of PacifiCorp, which is a wholly-
3 owned subsidiary of MidAmerican Energy Holdings Company. As such, Rocky
4 Mountain Power does not have publicly traded common stock or other
5 independent market data that would be required to estimate its cost of equity
6 directly. I begin my comparable company review with all the electric utilities that
7 are included in the *Value Line Investors Service (Value Line)*. *Value Line* is a
8 widely-followed, reputable source of financial data that is often used by regulatory
9 economists to estimate the cost of capital. To improve my peer group's
10 comparability with Rocky Mountain Power, I restricted the group to companies
11 with senior secured bond ratings of at least single-A by either Standard & Poor's
12 (S&P) or by Moody's. Rocky Mountain Power's bond ratings are A- from S&P
13 and A3 from Moody's. I also required the comparable companies to derive at least
14 70 percent of revenues from regulated utility sales, to have consistent financial
15 records not affected by recent mergers or restructuring, and to have a consistent
16 dividend record as required by the DCF model. The companies in my comparable
17 group are summarized in Exhibit No. 2.

18 In my risk premium analysis, I used Moody's average public utility bond
19 yields and projected single-A utility bond interest rates. These rates are consistent
20 with Rocky Mountain Power's single-A bond rating. Under current market
21 conditions, I believe this combination of DCF and risk premium approaches is the
22 most reliable method for estimating Rocky Mountain Power's cost of equity. The
23 data sources and the details of my cost of equity studies are contained in Exhibits

1 No. 2 through 6.

2 **Q. How is the remainder of your testimony organized?**

3 A. My testimony is divided into three additional sections. Following this
4 introduction, I review various methods for estimating the cost of equity. In this
5 section, I discuss comparable earnings methods, risk premium methods, and the
6 discounted cash flow model. In the following section, I review general capital
7 market costs and conditions and discuss recent developments in the electric utility
8 industry that may affect the cost of capital. In the final section, I discuss the
9 details of my cost of equity studies and summarize my ROE recommendations.

10 **Estimating the Cost of Equity Capital**

11 **Q. What is the purpose of this section of your testimony?**

12 A. The purpose of this section is to present a general definition of the cost of equity
13 capital and to compare the strengths and weaknesses of several of the most widely
14 used methods for estimating the cost of equity. Estimating the cost of equity is
15 fundamentally a matter of informed judgment, however, the various models
16 provide a concrete link to actual capital market data and assist with defining the
17 various relationships that underlie the ROE estimation process.

18 **Q. Please define the term "cost of equity capital" and provide an overview of
19 the cost estimation process.**

20 A. The cost of equity capital is the rate of return that equity investors expect to
21 receive. In concept it is no different than the cost of debt or the cost of preferred
22 stock. The cost of equity is the rate of return that common stockholders expect,
23 just as interest on bonds and dividends on preferred stock are the returns that

1 investors in those securities expect. Equity investors expect a return on their
2 capital commensurate with the risks they take and consistent with returns that
3 might be available from other similar investments. Unlike returns from debt and
4 preferred stocks, however, the equity return is not directly observable in advance
5 and, therefore, it must be estimated or inferred from capital market data and
6 trading activity.

7 An example helps to illustrate the cost of equity concept. Assume that an
8 investor buys a share of common stock for \$20 per share. If the stock's expected
9 dividend is \$1.00, the expected dividend yield is 5.0 percent ($\$1.00 / \$20 = 5.0$
10 percent). If the stock price is also expected to increase to \$21.20 after one year,
11 this one dollar and 20 cent expected gain adds an additional 6.0 percent to the
12 expected total rate of return ($\$1.20 / \$20 = 6.0$ percent). Therefore, buying the
13 stock at \$20 per share, the investor expects a total return of 11.0 percent: 5.0
14 percent dividend yield, plus 6.0 percent price appreciation. In this example, the
15 total expected rate of return at 11.0 percent is the appropriate measure of the cost
16 of equity capital, because it is this rate of return that caused the investor to commit
17 the \$20 of equity capital in the first place. If the stock were riskier, or if expected
18 returns from other investments were higher, investors would have required a
19 higher rate of return from the stock, which would have resulted in a lower initial
20 purchase price in market trading.

21 Each day market rates of return and prices change to reflect new investor
22 expectations and requirements. For example, when interest rates on bonds and
23 savings accounts rise, utility stock prices usually fall. This is true, at least in part,

1 because higher interest rates on these alternative investments make utility stocks
2 relatively less attractive, which causes utility stock prices to decline in market
3 trading. This competitive market adjustment process is quick and continuous, so
4 that market prices generally reflect investor expectations and the relative
5 attractiveness of one investment versus another. In this context, to estimate the
6 cost of equity one must apply informed judgment about the relative risk of the
7 company in question and knowledge about the risk and expected rate of return
8 characteristics of other available investments as well.

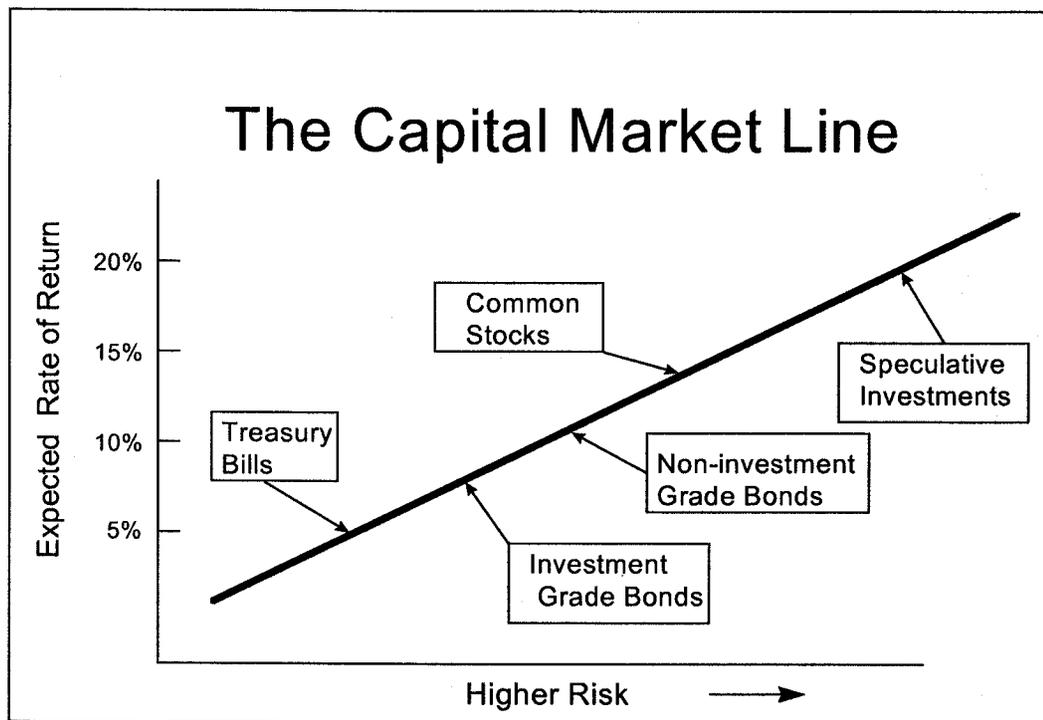
9 **Q. How does the market account for risk differences among the various**
10 **investments?**

11 A. Risk-return tradeoffs among capital market investments have been the subject of
12 extensive financial research. Literally dozens of textbooks and hundreds of
13 academic articles have addressed the issue. Generally, such research confirms the
14 common sense conclusion that investors will take additional risks only if they
15 expect to receive a higher rate of return. Empirical tests consistently show that
16 returns from low risk securities, such as U.S. Treasury bills, are the lowest; that
17 returns from longer-term Treasury bonds and corporate bonds are increasingly
18 higher as risks increase; and generally, returns from common stocks and other
19 more risky investments are even higher. These observations provide a sound
20 theoretical foundation for both the DCF and risk premium methods for estimating
21 the cost of equity capital. These methods attempt to capture the well founded
22 risk-return principle and explicitly measure investors' rate of return requirements.

1 Q. Can you illustrate the capital market risk-return principle that you just
2 described?

3 A. Yes. The following graph depicts the risk-return relationship that has become
4 widely known as the Capital Market Line (CML). The CML offers a graphical
5 representation of the capital market risk-return principle. The graph is not meant
6 to illustrate the actual expected rate of return for any particular investment, but
7 merely to illustrate in a general way the risk-return relationship.

Risk-Return Tradeoffs



8 As a continuum, the CML can be viewed as an available opportunity set for
9 investors. Those investors with low risk tolerance or investment objectives that
10 mandate a low risk profile should invest in assets depicted in the lower left-hand

1 portion of the graph. Investments in this area, such as Treasury bills and short-
2 maturity, high quality corporate commercial paper, offer a high degree of investor
3 certainty. In nominal terms (before considering the potential effects of inflation),
4 such assets are virtually risk-free.

5 Investment risks increase as one moves up and to the right along the CML.
6 A higher degree of uncertainty exists about the level of investment value at any
7 point in time and about the level of income payments that may be received.
8 Among these investments, long-term bonds and preferred stocks, which offer
9 priority claims to assets and income payments, are relatively low risk, but they are
10 not risk-free. The market value of long-term bonds, even those issued by the U.S.
11 Treasury, often fluctuates widely when government policies or other factors cause
12 interest rates to change.

13 Farther up the CML continuum, common stocks are exposed to even more
14 risk, depending on the nature of the underlying business and the financial strength
15 of the issuing corporation. Common stock risks include market-wide factors, such
16 as general changes in capital costs, as well as industry and company specific
17 elements that may add further to the volatility of a given company's performance.
18 As I will illustrate in my risk premium analysis, common stocks typically are
19 more volatile (have higher risk) than high quality bond investments and, therefore,
20 they reside above and to the right of bonds on the CML graph. Other more
21 speculative investments, such as stock options and commodity futures contracts,
22 offer even higher risks (and higher potential returns). The CML's depiction of the

1 risk-return tradeoffs available in the capital markets provides a useful perspective
2 for estimating investors' required rates of return.

3 **Q. How is the fair rate of return in the regulatory process related to the**
4 **estimated cost of equity capital?**

5 A. The regulatory process is guided by fair rate of return principles established in the
6 U.S. Supreme Court cases, *Bluefield Water Works* and *Hope Natural Gas*. There
7 the Court stated:

8 A public utility is entitled to such rates as will permit it to earn a
9 return on the value of the property which it employs for the
10 convenience of the public equal to that generally being made at the
11 same time and in the same general part of the country on
12 investments in other business undertakings which are attended by
13 corresponding risks and uncertainties; but it has no constitutional
14 right to profits such as are realized or anticipated in highly
15 profitable enterprises or speculative ventures. *Bluefield Water*
16 *Works & Improvement Company v. Public Service Commission of*
17 *West Virginia*, 262 U.S. 679, 692-693 (1923).

18 From the investor or company point of view, it is important that
19 there be enough revenue not only for operating expenses, but also
20 for the capital costs of the business. These include service on the
21 debt and dividends on the stock. By that standard the return to the
22 equity owner should be commensurate with returns on investments
23 in other enterprises having corresponding risks. That return,
24 moreover, should be sufficient to assure confidence in the financial
25 integrity of the enterprise, so as to maintain its credit and to attract
26 capital. *Federal Power Commission v. Hope Natural Gas Co.*, 320
27 U.S. 591, 603 (1944).

28 Based on these principles, the fair rate of return should closely parallel investor
29 opportunity costs as discussed above. If a utility is allowed a fair opportunity to
30 earn its market cost of equity, neither its stockholders nor its customers should be
31 disadvantaged.

1 **Q. What specific methods and capital market data are used to evaluate the cost**
2 **of equity?**

3 A. Techniques for estimating the cost of equity normally fall into three groups:
4 comparable earnings methods, risk premium methods, and DCF methods. The
5 first set of estimation techniques, the comparable earnings methods, has evolved
6 over time. The original comparable earnings methods were based on book
7 accounting returns. This approach developed ROE estimates by reviewing
8 accounting returns for unregulated companies thought to have risks similar to
9 those of the regulated company in question. These methods have generally been
10 rejected because they assume that the unregulated group is earning its actual cost
11 of capital, and that its equity book value is the same as its market value. In most
12 situations these assumptions are not valid, and, therefore, accounting-based
13 methods do not generally provide reliable cost of equity estimates.

14 More recent comparable earnings methods are based on historical stock
15 market returns rather than book accounting returns. While this approach has some
16 merit, it too has been criticized because there can be no assurance that historical
17 returns actually reflect current or future market requirements. Also, in practical
18 application, earned market returns tend to fluctuate widely from year to year. For
19 these reasons, a current cost of equity estimate (based on the DCF model or a risk
20 premium analysis) is usually required.

21 The second set of estimation techniques is grouped under the heading of
22 risk premium methods. These methods begin with currently observable market
23 returns, such as yields on government or corporate bonds, and add an increment to

1 account for the additional equity risk. The capital asset pricing model (CAPM)
2 and arbitrage pricing theory (APT) model are more sophisticated risk premium
3 approaches. The CAPM and APT methods estimate the cost of equity directly by
4 combining the "risk-free" government bond rate with explicit risk measures to
5 determine the risk premium required by the market. Although these methods are
6 widely used in academic cost of capital research, their additional data
7 requirements and their potentially questionable underlying assumptions have
8 detracted from their use in most regulatory jurisdictions. The basic risk premium
9 methods provide a useful parallel approach with the DCF model and assure
10 consistency with other capital market data in the cost of equity estimation process.

11 The third set of estimation techniques, based on the DCF model, is the
12 most widely used regulatory cost of equity estimation method. Like the risk
13 premium approach, the DCF model has a sound basis in theory, and many argue
14 that it has the additional advantage of simplicity. I will describe the DCF model
15 in detail below, but in essence its estimate of the investor required ROE is simply
16 the sum of the expected dividend yield and the expected long-term dividend (or
17 price) growth rate. While dividend yields are easy to obtain, estimating long-term
18 growth is more difficult. Because the constant growth DCF model also requires
19 very long-term growth estimates (technically to infinity), some argue that its
20 application is too speculative to provide reliable results, resulting in the preference
21 for the multistage growth DCF analysis.

1 **Q. Of the three estimation methods, which do you believe provides the most**
2 **reliable results?**

3 A. From my experience, a combination of discounted cash flow and risk premium
4 methods provides the most reliable approach. While the caveat about estimating
5 long-term growth must be observed, the DCF model's other inputs are readily
6 obtainable, and the model's results typically are consistent with capital market
7 behavior. The risk premium methods provide a good parallel approach to the
8 DCF model and further ensure that current market conditions are accurately
9 reflected in the cost of equity estimate.

10 **Q. Please explain the DCF model.**

11 A. The DCF model is predicated on the concept that stock prices represent the
12 present value or discounted value of all future dividends that investors expect to
13 receive. In the most general form, the DCF model is expressed in the following
14 formula:

$$15 \quad P_0 = D_1/(1+k) + D_2/(1+k)^2 + \dots + D_\infty/(1+k)^\infty \quad (1)$$

16 where P_0 is today's stock price; D_1 , D_2 , etc. are all future dividends and k is the
17 discount rate, or the investor's required rate of return on equity. Equation (1) is a
18 routine present value calculation based on the assumption that the stock's price is
19 the present value of all dividends expected to be paid in the future.

20 Under the additional assumption that dividends are expected to grow at a
21 constant rate "g" and that k is strictly greater than g , equation (1) can be solved for
22 k and rearranged into the simple form:

$$23 \quad k = D_1/P_0 + g \quad (2)$$

1 Equation (2) is the familiar constant growth DCF model for cost of equity
2 estimation, where D_1/P_0 is the expected dividend yield and g is the long-term
3 expected dividend growth rate.

4 Under circumstances when growth rates are expected to fluctuate or when
5 future growth rates are highly uncertain, the constant growth model may not give
6 reliable results. Although the DCF model itself is still valid [equation (1) is
7 mathematically correct], under such circumstances the simplified form of the
8 model must be modified to capture market expectations accurately.

9 Recent events and current market conditions in the electric utility industry
10 as discussed later appear to challenge the constant growth assumption of the
11 traditional DCF model. Since the mid-1980s, dividend growth expectations for
12 many electric utilities have fluctuated widely. In fact, over one-third of the
13 electric utilities in the U.S. have reduced or eliminated their common dividends
14 over this time period. On the other hand, some of these companies have
15 reestablished their dividends, producing exceptionally high growth rates. Under
16 these circumstances, long-term growth rate estimates may be highly uncertain, and
17 estimating a reliable "constant" growth rate for many companies is often difficult.

18 **Q. Can the DCF model be applied when the constant growth assumption is**
19 **violated?**

20 A. Yes. When growth expectations are uncertain, the more general version of the
21 model represented in equation (1) should be solved explicitly over a finite
22 "transition" period while uncertainty prevails. The constant growth version of the
23 model can then be applied after the transition period, under the assumption that

1 more stable conditions will prevail in the future. There are two alternatives for
2 dealing with the nonconstant growth transition period.

3 Under the "terminal price" nonconstant growth approach, equation (1) is
4 written in a slightly different form:

$$5 \quad P_0 = D_1/(1+k) + D_2/(1+k)^2 + \dots + P_T/(1+k)^T \quad (3)$$

6 where the variables are the same as in equation (1) except that P_T is the estimated
7 stock price at the end of the transition period T . Under the assumption that
8 normal growth resumes after the transition period, the price P_T is then expected to
9 be based on constant growth assumptions. With the terminal price approach, the
10 estimated cost of equity, k , is just the rate of return that investors would expect to
11 earn if they bought the stock at today's market price, held it and received
12 dividends through the transition period (until period T), and then sold it for price
13 P_T . In this approach, the analyst's task is to estimate the rate of return that
14 investors expect to receive given the current level of market prices they are
15 willing to pay.

16 Under the "multistage" nonconstant growth approach, equation (1) is
17 simply expanded to incorporate two or more growth rate periods, with the
18 assumption that a permanent constant growth rate can be estimated for some point
19 in the future:

$$20 \quad P_0 = D_0(1+g_1)/(1+k) + \dots + D_0(1+g_2)^n/(1+k)^{n+} \\ 21 \quad \dots + (D_0(1+g_T)^{(T+1)})/(k-g_T)/(1+k)^T \quad (4)$$

22 where the variables are the same as in equation (1), but g_1 represents the growth
23 rate for the first period, g_2 for a second period, and g_T for the period from year T

1 (the end of the transition period) to infinity. The first two growth rates are simply
2 estimates for fluctuating growth over "n" years (typically 5 or 10 years) and g_T is a
3 constant growth rate assumed to prevail forever after year T. The difficult task for
4 analysts in the multistage approach is determining the various growth rates for
5 each period.

6 Although less convenient for exposition purposes, the nonconstant growth
7 models are based on the same valid capital market assumptions as the constant
8 growth version. The nonconstant growth approach simply requires more explicit
9 data inputs and more work to solve for the discount rate, k . Fortunately, the
10 required data are available from investment and economic forecasting services,
11 and computer algorithms can easily produce the required solutions. Both constant
12 and nonconstant growth DCF analyses are presented in the following section.

13 **Q. Please explain the risk premium methodology.**

14 A. Risk premium methods are based on the assumption that equity securities are
15 riskier than debt and, therefore, that equity investors require a higher rate of
16 return. This basic premise is well supported by legal and economic distinctions
17 between debt and equity securities, and it is widely accepted as a fundamental
18 capital market principle. For example, debt holders' claims to the earnings and
19 assets of the borrower have priority over all claims of equity investors. The
20 contractual interest on mortgage debt must be paid in full before any dividends
21 can be paid to shareholders, and secured mortgage claims must be fully satisfied
22 before any assets can be distributed to shareholders in bankruptcy. Also, the
23 guaranteed, fixed-income nature of interest payments makes year-to-year returns

1 from bonds typically more stable than capital gains and dividend payments on
2 stocks. All these factors demonstrate the more risky position of stockholders and
3 support the equity risk premium concept.

4 **Q. Are risk premium estimates of the cost of equity consistent with other**
5 **current capital market costs?**

6 A. Yes. The risk premium approach is especially useful because it is founded on
7 current market interest rates, which are directly observable. This feature assures
8 that risk premium estimates of the cost of equity begin with a sound basis, which
9 is tied directly to current capital market costs.

10 **Q. Is there similar consensus about how risk premium data should be**
11 **employed?**

12 A. No. In regulatory practice, there is often considerable debate about how risk
13 premium data should be interpreted and used. Since the analyst's basic task is to
14 gauge investors' required returns on long-term investments, some argue that the
15 estimated equity spread should be based on the longest possible time period.
16 Others argue that market relationships between debt and equity from several
17 decades ago are irrelevant and that only recent debt-equity observations should be
18 given any weight in estimating investor requirements. There is no consensus on
19 this issue. Since analysts cannot observe or measure investors' expectations
20 directly, it is not possible to know exactly how such expectations are formed or,
21 therefore, to know exactly what time period is most appropriate in a risk premium
22 analysis.

23 The important point is to answer the following question: "What rate of

1 return should equity investors reasonably expect relative to returns that are
2 currently available from long-term bonds?" The risk premium studies and
3 analyses I discuss later address this question. My risk premium recommendation
4 is based on an intermediate position that avoids some of the problems and
5 concerns that have been expressed about both very long and very short periods of
6 analysis with the risk premium model.

7 **Q. Please summarize your discussion of cost of equity estimation techniques.**

8 A. Estimating the cost of equity is one of the most controversial issues in utility
9 ratemaking. Because actual investor requirements are not directly observable,
10 several methods have been developed to assist in the estimation process. The
11 comparable earnings method is the oldest but perhaps least reliable. Its use of
12 accounting rates of return, or even historical market returns, may or may not
13 reflect current investor requirements. Differences in accounting methods among
14 companies and issues of comparability also detract from this approach.

15 The DCF and risk premium methods have become the most widely
16 accepted in regulatory practice. A combination of the DCF model and a review of
17 risk premium data, in my opinion, provides the most reliable cost of equity
18 estimate. While the DCF model does require judgment about future growth rates,
19 the dividend yield is straightforward, and the model's results are generally
20 consistent with actual capital market behavior. For these reasons, I will rely on a
21 combination of the DCF model and a risk premium analysis in the cost of equity
22 studies that follow.

1 **Fundamental Factors That Affect the Cost of Equity**

2 **Q. What is the purpose of this section of your testimony?**

3 A. In this section, I review recent capital market conditions and industry and
4 company-specific factors that should be reflected in the cost of capital estimate.

5 **Q. What has been the recent experience in the U.S. capital markets?**

6 A. Exhibit No. 3, page 1, provides a review of annual interest rates and rates of
7 inflation in the U.S. economy over the past ten years. During that time inflation
8 and fixed income market costs declined and, generally, have been lower than rates
9 that prevailed in the previous decade. Inflation, as measured by the Consumer
10 Price Index ("CPI"), until 2003 had remained at historically low levels not seen
11 consistently since the early 1960s. Since 2003, however, inflation rates have
12 increased with the average for 2004 through 2006 similar to the longer-term
13 historical average, which is above 3 percent. The inflation rate for 2007 was even
14 higher at 4.1 percent and, with the large recent increases in energy and food
15 prices, for the twelve months ended July 2008, the CPI increased 5.6 percent.
16 These inflationary pressures exert a direct influence on capital market
17 expectations and result in a higher cost of capital.

18 The Federal Reserve System's monetary policy options are currently
19 limited by rising inflation and simultaneously weak economic conditions. During
20 the period from mid-2004 until mid-2006, the Federal Reserve System increased
21 the short-term Federal Funds interest rate 17 times, raising it from 1 percent to
22 5.25 percent. In late 2007, in response to the extreme turbulence in the sub-prime
23 credit markets, the Federal Reserve Open Market Committee began aggressively

1 reducing the Federal Funds rate. Since September 2007, the rate has been lowered
2 seven times to its current level of 2.0 percent. With rising inflation expectations,
3 however, and low market tolerance for additional risk, long-term corporate
4 interest rates have not declined over the past two years. Furthermore, estimates
5 for the coming year are for additional interest rate increases.

6 **Q. How have long-term interest rates changed over the past two years?**

7 A. The following table provides the month-by-month interest rates paid by utilities
8 and the U.S. Treasury:

Table 1
Long-Term Interest Rate Trends

Month	Single-A Utility Rate	30-Year Treasury Rate	Single-A Utility Spread
Jan-06	5.75	ND	ND
Feb-06	5.82	4.54	1.28
Mar-06	5.98	4.73	1.25
Apr-06	6.29	5.06	1.23
May-06	6.42	5.20	1.22
Jun-06	6.40	5.15	1.25
Jul-06	6.37	5.13	1.24
Aug-06	6.20	5.00	1.20
Sep-06	6.00	4.85	1.15
Oct-06	5.98	4.85	1.13
Nov-06	5.80	4.69	1.11
Dec-06	5.81	4.68	1.13
Jan-07	5.96	4.85	1.11
Feb-07	5.90	4.82	1.08
Mar-07	5.85	4.72	1.13
Apr-07	5.97	4.87	1.10
May-07	5.99	4.90	1.09
Jun-07	6.30	5.20	1.10
Jul-07	6.25	5.11	1.14
Aug-07	6.24	4.93	1.31
Sep-07	6.18	4.79	1.39
Oct-07	6.11	4.77	1.34
Nov-07	5.97	4.52	1.45
Dec-07	6.16	4.53	1.63
Jan-08	6.02	4.33	1.69
Feb-08	6.22	4.52	1.70
Mar-08	6.21	4.39	1.82
Apr-08	6.29	4.44	1.85
May-08	6.28	4.60	1.68
Jun-08	6.38	4.69	1.69
Jul-08	6.40	4.57	1.83
Aug-08	6.37	4.50	1.87

Sources: Mergent Bond Record (Utility Rates); www.federalreserve.gov (Treasury Rates).

1 The data in Table 1 show that in August 2008 long-term single-A utility interest
2 rates were near the highest levels paid in the past two years. More important,
3 recent market turbulence from the sub-prime lending crisis and concerns about
4 renewed inflation have increased interest rates spreads (the differences between
5 utility borrowing costs and U.S. Treasury interest rates) dramatically. While the
6 Federal Reserve System has reduced short-term borrowing rates for banks (the
7 Fed Funds rate) and the "flight to safety" experience has driven down some U.S.
8 Treasury rates, corporate borrowers have seen just the opposite trend. Increased
9 risk aversion has caused significantly higher borrowing costs for corporations
10 such as Rocky Mountain Power. While the effects of market turbulence are not
11 always well captured in financial models for estimating the rate of return, the
12 evolving long-term borrowing cost relationships for corporate entities should be
13 considered explicitly in estimates of the going cost of equity capital.

14 **Q. What levels of interest rates are forecast for the coming year?**

15 A. Both corporate and government interest rates are expected to rise further from
16 present levels. Exhibit No. 3, page 3, provides Standard & Poor's most recent
17 economic forecast from its *Trends & Projections* publication for August 2008.
18 S&P forecasts resumed economic growth after the first quarter of 2009. For 2008,
19 growth in real Gross Domestic Product (GDP) is projected at only 1.7 percent
20 with nominal GDP (real GDP plus inflation) at 4.0 percent. For 2009, nominal
21 GDP growth is projected at 3.1 percent. These projected growth rates compare to
22 a real rate for 2007 of 2.0 percent and a nominal rate of 4.8 percent. S&P also
23 forecasts that interest rates will rise from current levels. The summary interest

1 rate data are presented in the following table:

Table 2
Standard & Poor's Interest Rate Forecast

	August 2008 Average	Average 2008 Est.	Average 2009 Est.
Treasury Bills	1.7%	1.8%	2.4%
10-Yr. T-Bonds	3.9%	3.9%	4.5%
30-Yr. T-Bonds	4.5%	4.5%	4.9%
Aaa Corporate Bonds	5.6%	5.6%	6.1%

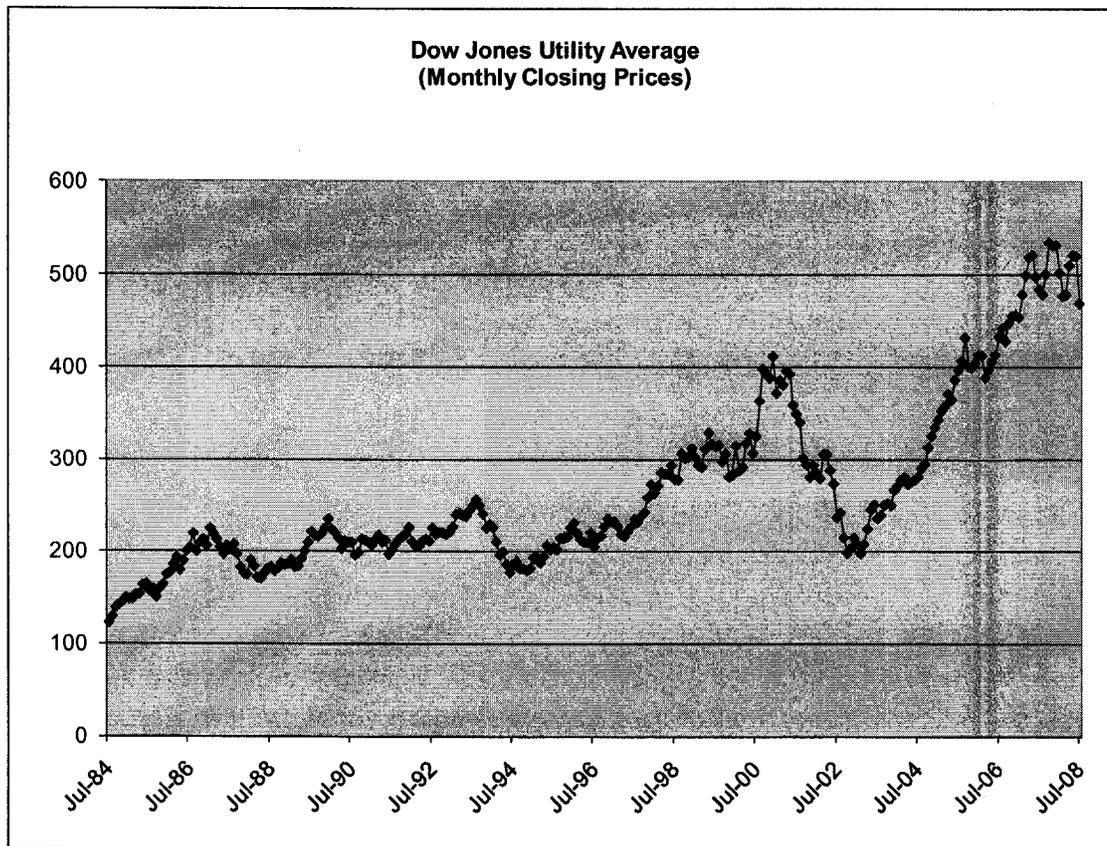
Sources: www.federalreserve.gov, (August 2008 Averages);
Standard & Poor's *Trends & Projections*, August 2008, page 8
(Projected Rates).

2 The data in Table 2 show that interest rates in 2009 are projected to increase from
3 current levels. The average 30-year-term Treasury bond rate for 2009 is projected
4 by S&P to reach 4.9 percent in this period, relative to the current level of 4.5.

5 Similarly, the rate on corporate bonds is expected to increase from 5.6 percent to
6 6.1 percent, a rise of 50 basis points. These increasing interest rate trends offer
7 important perspective for judging the cost of capital in the present case and
8 illustrate why the return on equity must be set at a level sufficient to reflect these
9 rising costs.

10 **Q. How have utility stocks performed during the past several years?**

11 A. Utility stock prices have fluctuated widely. The Dow Jones Utility Average
12 (DJUA) has ranged between about 200 and 500 during the past six years. The
13 wider fluctuations in more recent years are vividly illustrated in the following
14 graph of DJUA prices over the past 25 years.



1 Widely fluctuating prices for natural gas as well as recent increases in coal prices
 2 and other uncertainties have created further unsettling conditions. These factors
 3 and continuing concerns for the more competitive market environment for all
 4 utility services will likely create further uncertainties and market volatility for
 5 utility shares. In this environment, investors' return expectations and requirements
 6 for providing capital to the utility industry remain high relative to the longer-term
 7 traditional view of the utility industry.

8 **Q. What is the industry's current fundamental position?**

9 A. Many electric utilities are attempting to return to their core businesses and hope to
 10 see more stable results over the next several years. S&P reflects this sentiment in
 11 its most recent *Electric Utility Industry Survey*:

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Standard & Poor's Industry Surveys

We expect the performance of both the electric utility sector and the individual companies within the sector to remain volatile over the next several years. However, we believe the stocks will be less volatile than they were in the first few years of the decade.... The performance of the sector, however, will remain sensitive to the macroeconomic environment and market forces surrounding it. (Standard & Poor's *Industry Surveys*, Electric Utilities, August 14, 2008, p. 4)

Value Line notes electric utilities' relatively poor performance this year:

Value Line Investors' Survey

As a group, utility stocks have held up better than the overall market in recent weeks, but have performed just as poorly since the start of 2008. Many of these equities appear to be fully valued or even overvalued. (*Value Line Investment Survey*, Electric Utility (West) Industry, August 8, 2008, p. 1781.

Price volatility for utility shares and credit market gyrations make it all the more difficult to estimate the fair, on-going cost of capital.

Over the past several years, the greatest consideration for utility investors has been the industry's transition to competition. With the passage of the National Energy Policy Act in 1992 and the Federal Energy Regulatory Commission's (FERC) Order 888 in 1996, the stage was set for vastly increased competition in the electric utility industry. The 1992 Act's mandate for open access to the transmission grid and FERC's implementation through Order 888 effectively opened the market for wholesale electricity to competition. Previously protected utility service territory and lack of transmission access in some parts of the country had limited the availability of competitive bulk power prices. The Energy Policy Act and Order 888 have essentially eliminated such constraints for incremental power needs.

1 In addition to wholesale issues at the federal level, many states
2 implemented retail access and have opened their retail markets to competition.
3 Prior to the Western energy crisis, investors' concerns had focused principally on
4 appropriate transition mechanisms and the recovery of stranded costs. More
5 recently, however, provisions for dealing with power cost adjustments have
6 become a larger concern. The Western energy crisis refocused market concerns
7 and contributed significantly to increased market risk perceptions for companies
8 without power cost recovery provisions. As expected, the opening of previously
9 protected utility markets to competition, and the uncertainty created by the
10 removal of regulatory protection, has raised the level of uncertainty about
11 investment returns across the entire industry.

12 **Q. Is Rocky Mountain Power affected by these same market uncertainties and**
13 **increasing utility capital costs?**

14 A. Yes. To some extent all electric utilities are being affected by the industry's
15 transition to competition. Although retail deregulation has not occurred in Idaho,
16 Rocky Mountain Power's operations have been significantly affected by transition
17 and restructuring events around the country. In fact, the uncertainty associated
18 with the changes that are transforming the utility industry as a whole, as viewed
19 from the perspective of the investor, remain a factor in assessing any utility's
20 required ROE, including the ROE from Rocky Mountain Power's operations in
21 Idaho. For Rocky Mountain Power specifically, its use of long-term purchased
22 power agreements can significantly impact the Company's credit quality and
23 perceived financial risk because credit rating agencies view such contracts as debt

1 equivalents. The Company's equity infusions and its efforts to strengthen the
2 equity component of its capital structure are constructive efforts to mitigate this
3 debt equivalent risk caused by its long-term power contracts.

4 **Q. How do capital market concerns and financial risk perceptions affect the cost**
5 **of equity capital?**

6 A. As I discussed previously, equity investors respond to changing assessments of
7 risk and financial prospects by changing the price they are willing to pay for a
8 given security. When risk perceptions increase or financial prospects decline,
9 investors refuse to pay the previously existing market price for a company's
10 securities. Market supply and demand forces then establish a new lower price.
11 The lower market price typically translates into a higher cost of capital through a
12 higher dividend yield requirement as well as the potential for increased capital
13 gains if prospects improve. In addition to market losses for prior shareholders, the
14 higher cost of capital is transmitted directly to the company by the need to issue
15 more shares to raise any given amount of capital for future investment. The
16 additional shares also impose additional future dividend requirements and, all else
17 equal, would reduce future earnings per share growth prospects.

18 **Q. How have regulatory commissions responded to these changing market and**
19 **industry conditions?**

20 A. Over the past five years, allowed equity returns have generally followed interest
21 rate changes. The following table summarizes the overall average ROEs allowed
22 for electric utilities since 2004:

Authorized Electric Utility Equity Returns

	2004	2005	2006	2007	2008
1 st Quarter	11.00%	10.51%	10.38%	10.27%	10.50%
2 nd Quarter	10.54%	10.05%	10.68%	10.27%	10.57%
3 rd Quarter	10.33%	10.84%	10.06%	10.02%	
4 th Quarter	10.91%	10.75%	10.39%	10.56%	
Full Year Average	10.75%	10.54%	10.36%	10.36%	10.53%
Average Utility Debt Cost	6.20%	5.67%	6.08%	6.11%	6.32%
Indicated Average Risk Premium	4.55%	4.87%	4.28%	4.25%	4.21%

Source: *Regulatory Focus*, Regulatory Research Associates, Inc., Major Rate Case Decisions, July 2, 2008.

1 Since 2004, equity risk premiums (the difference between allowed equity returns
2 and utility interest rates) have ranged from 4.21 percent to 4.87 percent. At the
3 low end of this risk premium range, with an allowed equity risk premium of 4.21
4 percent, the indicated cost of equity is 10.77 percent (6.56 projected single-A
5 interest rate + 4.21% risk premium = 10.77%)¹. At the upper end of this risk
6 premium range, with an allowed equity risk premium of 4.87 percent, the
7 indicated cost of equity is 11.43 percent (6.56 projected single-A interest rate +
8 4.87% risk premium = 11.43%).

9 **Cost of Equity Capital for Rocky Mountain Power**

10 **Q. What is the purpose of this section of your testimony?**

11 A. The purpose of this section is to present my quantitative studies of the cost of
12 equity capital for Rocky Mountain Power and to discuss the details and results of
13 my analysis.

¹ The single-A utility interest rate of 6.56% is equal to the forecasted 30-year Treasury bond rate of 4.9% from Exhibit No. 3, page 3, plus the average single-A utility spread over long-term Treasuries of 1.66% for the 12 months ended August 2008 from Exhibit No. 3, page 2.

1 **Q. How are your studies organized?**

2 A. In the first part of my analysis, I apply three versions of the DCF model to a 16-
3 company group of electric utilities based on the selection criteria discussed
4 previously. In the second part of my analysis, I present my risk premium study
5 and I review risk premium results from the longer-term Ibbotson Stocks, Bonds,
6 Bills, and Inflation market data (Ibbotson data) now published by Morningstar,
7 Inc.

8 My DCF analysis is based on three versions of the DCF model. In the first
9 version of the DCF model, I use the constant growth format with long-term
10 expected growth based on analysts' estimates of five-year utility earnings growth.
11 While I continue to endorse a longer-term growth estimation approach based on
12 growth in overall gross domestic product, I show the traditional DCF results
13 because this is the approach that has traditionally been used by many regulators.
14 In the second version of the DCF model, for the estimated growth rate, I use the
15 estimated long-term GDP growth rate. In the third version of the DCF model, I
16 use a two-stage growth approach, with stage one based on *Value Line's* three-to-
17 five-year dividend projections and stage two based on long-term projected growth
18 in GDP. The dividend yields in all three of the annual models are from *Value*
19 *Line's* projections of dividends for the coming year and stock prices are from the
20 three-month average for the months that correspond to the *Value Line* editions
21 from which the underlying financial data are taken.

1 **Q. Why do you believe the long-term GDP growth rate should be used to**
2 **estimate long-term growth expectations in the DCF model?**

3 A. Growth in nominal GDP (real GDP plus inflation) is the most general measure of
4 economic growth in the U.S. economy. For long time periods, such as those used
5 in the Ibbotson Associates rate of return data, GDP growth has averaged between
6 5 percent and 8 percent per year. From this observation, Professors Brigham and
7 Houston offer the following observation concerning the appropriate long-term
8 growth rate in the DCF Model:

9 Expected growth rates vary somewhat among companies, but
10 dividends for mature firms are often expected to grow in the future
11 at about the same rate as nominal gross domestic product (real
12 GDP plus inflation). On this basis, one might expect the dividend
13 of an average, or "normal," company to grow at a rate of 5 to 8
14 percent a year. (Eugene F. Brigham and Joel F. Houston,
15 *Fundamentals of Financial Management*, 11th Ed. 2007, page
16 298.)

17 Other academic research on corporate growth rates offers similar conclusions
18 about GDP growth as well as concerns about the long-term adequacy of analysts'
19 forecasts:

20 Our estimated median growth rate is reasonable when compared to
21 the overall economy's growth rate. On average over the sample
22 period, the median growth rate over 10 years for income before
23 extraordinary items is about 10 percent for all firms. ... After
24 deducting the dividend yield (the median yield is 2.5 percent per
25 year), as well as inflation (which averages 4 percent per year over
26 the sample period), the growth in real income before extraordinary
27 items is roughly 3.5 percent per year. This is consistent with the
28 historical growth rate in real gross domestic product, which has
29 averaged about 3.4 percent per year over the period 1950-1998.
30 (Louis K. C. Chan, Jason Karceski, and Josef Lakonishok, "The
31 Level and Persistence of Growth Rates," *The Journal of Finance*,
32 April 2003, p. 649)

1 IBES long-term growth estimates are associated with realized
2 growth in the immediate short-term future. Over long horizons,
3 however, there is little forecastability in earnings, and analysts'
4 estimates tend to be overly optimistic. ... On the whole, the
5 absence of predictability in growth fits in with the economic
6 intuition that competitive pressures ultimately work to correct
7 excessively high or excessively low profitability growth. (Ibid,
8 page 683)

9 These findings support the notion that long-term growth expectations are more
10 closely predicted by broader measures of economic growth than by near-term
11 analysts' estimates. Especially for the very long-term growth rate requirements of
12 the DCF model, the growth in nominal GDP should be considered an important
13 input.

14 **Q. How did you estimate the expected long-run GDP growth rate?**

15 A. I developed my long-term GDP growth forecast from nominal GDP data
16 contained in the St. Louis Federal Reserve Bank data base. That data for the
17 period 1947 through 2007 is summarized in my RMP Exhibit No. 4. As shown at
18 the bottom of that exhibit, the overall average for the period was 7.0 percent. The
19 data also show, however, that in the more recent years since 1980, lower inflation
20 has resulted in lower overall GDP growth. For this reason I gave more weight to
21 the more recent years in my GDP forecast. This approach is consistent with the
22 concept that more recent data should have a greater effect on expectations and
23 with generally lower near- and intermediate-term growth rate forecasts that
24 presently exist. Based on this approach, my overall forecast for long-term GDP
25 growth is 50 basis points lower than the long-term average, at a level of 6.5
26 percent.

1 **Q. Please summarize the results of your DCF analyses.**

2 A. The DCF results for my comparable company group are presented in Exhibit No.
3 5. The traditional constant growth DCF model results, with the projected growth
4 rate based on analysts' forecasts, are shown in the first column on page 1 of that
5 exhibit. That analysis indicates an ROE of 10.7 percent to 10.9 percent. In the
6 second column of page 1, I recalculate the constant growth results with long-term
7 forecasted growth in GDP as the projected growth rate. That analysis also
8 indicates an ROE of 10.8 percent to 10.9 percent. Finally, in the third column of
9 page 1, I present the multistage DCF results. The multistage model indicates an
10 ROE range of 10.6 percent to 10.7 percent. Based on all three versions of the
11 DCF model, my analysis supports a reasonable ROE range of 10.6 percent to 10.9
12 percent.

13 **Q. What are the results of your risk premium studies?**

14 A. The details and results of my risk premium studies are shown in my Exhibit No. 6.
15 These studies and other risk premium data indicate an ROE range of 10.85 percent
16 to 11.06 percent.

17 **Q. How are your risk premium studies structured?**

18 A. My risk premium studies are divided into two parts. First, I compare electric
19 utility authorized ROEs for the period 1980-2007 to contemporaneous long-term
20 utility interest rates. The differences between the average authorized ROEs and
21 the average interest rate for the year is the indicated equity risk premium. I then
22 add the indicated equity risk premium to the forecasted single-A utility bond
23 interest rate to estimate ROE. Because there is a strong inverse relationship

1 between risk premiums and interest rates (when interest rates are high, risk
2 premiums are low and vice versa), further analysis is required to estimate the
3 current risk premium level.

4 The inverse relationship between risk premiums and interest rate levels is
5 well documented in numerous, well-respected academic studies. These studies
6 typically use regression analysis or other statistical methods to predict or measure
7 the risk premium relationship under varying interest rate conditions. On page 2 of
8 Exhibit No. 6, I provide regression analyses of the allowed annual equity risk
9 premiums relative to interest rate levels. The negative and statistically significant
10 regression coefficients confirm the inverse relationship between risk premiums
11 and interest rates. This means that when interest rates rise by one percentage
12 point, the cost of equity increases, but by a smaller amount. Similarly, when
13 interest rates decline by one percentage point, the cost of equity declines by less
14 than one percentage point. I use this negative interest rate change coefficient in
15 conjunction with current interest rates to estimate the appropriate current equity
16 risk premium.

17 **Q. How do the results of your risk premium study compare to levels found in**
18 **other published risk premium studies?**

19 A. Based on my risk premium studies, I am conservatively recommending a lower
20 risk premium than is often found in other published risk premium data. For
21 example, the most widely followed risk premium data are provided in the
22 Morningstar Ibbotson ("Ibbotson") data studies. These data, for the period 1926-
23 2007, indicate an arithmetic mean risk premium of 6.1 percent for common stocks

1 versus long-term corporate bonds. Under the assumption of geometric mean
 2 compounding, the Ibbotson risk premium for common stocks versus corporate
 3 bonds is 4.5 percent. Based on the more conservative geometric mean risk
 4 premium, the Ibbotson data indicate a cost of equity of 11.06 percent (6.56%
 5 forecasted debt cost + 4.5% risk premium = 11.06%). Based on the arithmetic
 6 risk premium, the Ibbotson data indicate a cost of equity of over 12 percent
 7 (6.56% forecasted debt cost + 6.1% risk premium = 12.66%). Although I do not
 8 use the Ibbotson data in my final ROE estimates, I do review the data for their
 9 perspective on the overall market cost of equity capital.

10 **Q. Please summarize the results of your cost of equity analysis.**

11 **A.** The following table summarizes my results:

Summary of Cost of Equity Estimates

<u>DCF Analysis</u>	<u>Indicated Cost</u>
Constant Growth (Analysts' Growth)	10.7%-10.9%
Constant Growth (GDP Growth)	10.8%-10.9%
Multistage Growth Model	10.6%-10.7%
Reasonable DCF Range	<u>10.6%-10.9%</u>
 <u>Risk Premium Analysis</u>	 <u>Indicated Cost</u>
Utility Debt + Risk Premium	
Risk Premium (6.56% + 4.29%)	10.85%
Ibbotson Risk Premium Analysis	
Risk Premium (6.56% + 4.5%)	11.06%
 <u>Rocky Mountain Power Estimated ROE</u>	 <u>10.75%</u>

1 **Q. How should these results be interpreted to determine the fair cost of equity**
2 **for Rocky Mountain Power?**

3 A. Caution should be exercised in interpreting the basic quantitative DCF and risk
4 premium results, because they are based on recent historically low points in the
5 economic cycle. Under such conditions, economic projections should also be
6 considered. Resumed economic growth and higher expected interest rates suggest
7 that the use of a lower DCF range would fail to recognize the ongoing risks and
8 uncertainties that exist in the electric utility industry business as well as the
9 uncertainties Rocky Mountain Power is currently facing. From this perspective,
10 and with consideration of the Company's large on-going capital requirements, the
11 fair and reasonable cost of equity capital for Rocky Mountain Power is 10.75
12 percent.

13 **Q. Does this conclude your testimony?**

14 A. Yes, it does.

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Case No. PAC-E-08-07

Exhibit No. 2

Witness: Samuel C. Hadaway

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

ROCKY MOUNTAIN POWER

Exhibit Accompanying Direct Testimony of Samuel C. Hadaway

Comparable Company Fundamentals

September 2008

Rocky Mountain Power Comparable Company Fundamental Characteristics

No.	Company	(1)		(2)		(3)		
		% Regulated Revenue	S&P	Credit Rating	Moody's	Common Equity Ratio	Long-Term Debt Ratio	Preferred Stock Ratio
1	ALLETE	86.0%	A-	NR	NR	64.4%	35.6%	0.0%
2	Alliant Energy Co.	90.5%	A-	A2	A2	61.9%	32.4%	5.7%
3	Con. Edison	77.2%	A-	A1	A1	53.1%	45.6%	1.3%
4	DTE Energy Co.	79.6%	A-	A3	A3	45.6%	54.4%	0.0%
5	Edison Internat.	79.9%	A	A2	A2	46.0%	49.1%	4.9%
6	Energy Corp.	80.6%	A-	A-	Baa2	43.9%	54.3%	1.8%
7	FPL Group, Inc.	76.1%	A	Aa3	Aa3	48.8%	51.2%	0.0%
8	IDACORP	76.0%	A-	A3	A3	51.1%	48.9%	0.0%
9	NSTAR	95.8%	AA-	A1	A1	40.1%	58.9%	1.0%
10	PG&E Corp.	100.0%	BBB+	A3	A3	50.4%	48.1%	1.5%
11	Portland General	100.0%	A	Baa1	Baa1	50.1%	49.9%	0.0%
12	Progress Energy	99.8%	A-	A2	A2	48.8%	50.6%	0.6%
13	Southern Co.	82.3%	A	A2	A2	44.9%	51.2%	3.9%
14	Vectren Corp.	77.0%	A	A3	A3	49.8%	50.2%	0.0%
15	Wisconsin Energy	99.7%	A-	Aa3	Aa3	49.2%	50.3%	0.5%
16	Xcel Energy Inc.	99.3%	A-	A3	A3	49.4%	49.7%	0.9%
		87.5%	A/A-	A2/A3	A2/A3	49.8%	48.8%	1.4%

Column Sources:

- (1) Most recent company 10-Ks.
- (2) AUS Utility Reports, Aug 2008.
- (3) Value Line Investment Survey, Electric Utility (East), Aug 29, 2008; (Central), Jun 27, 2008; (West), Aug 8, 2008.

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Case No. PAC-E-08-07

Exhibit No. 3

Witness: Samuel C. Hadaway

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

ROCKY MOUNTAIN POWER

Exhibit Accompanying Direct Testimony of Samuel C. Hadaway

Capital Market Information

September 2008

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ROCKY MOUNTAIN POWER

Exhibit Accompanying Direct Testimony of Samuel C. Hadaway

GDP Growth Rate

September 2008

**Rocky Mountain Power
 Historical Capital Market Costs**

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Prime Rate	8.4%	8.0%	9.2%	6.9%	4.7%	4.1%	4.3%	6.2%	8.0%	8.1%
Consumer Price Index	1.6%	2.7%	3.4%	1.6%	2.4%	1.8%	3.4%	3.4%	2.6%	4.1%
Long-Term Treasuries	5.6%	5.9%	5.9%	5.5%	5.4%	5.0%	5.1%	4.7%	5.0%	4.9%
Moody's Avg Utility Debt	7.0%	7.6%	8.1%	7.7%	7.5%	6.6%	6.2%	5.7%	6.1%	6.1%
Moody's A Utility Debt	7.0%	7.6%	8.2%	7.8%	7.4%	6.6%	6.2%	5.7%	6.1%	6.1%

SOURCES:

Prime Interest Rate - Federal Reserve Bank of St. Louis website
 Consumer Price Index For All Urban Consumers: All Items (Seasonally Adjusted, December to December) - Federal Reserve Bank of St. Louis website
 Long-Term Treasuries - Federal Reserve Bank of St. Louis website
 Moody's Average Utility Debt - Moody's (Mergent) Bond Record
 Moody's A Utility Debt - Moody's (Mergent) Bond Record

Rocky Mountain Power
Long-Term Interest Rate Trends

Month	Single-A Utility Rate	30-Year Treasury Rate	Single-A Utility Spread
Jan-06	5.75	ND	ND
Feb-06	5.82	4.54	1.28
Mar-06	5.98	4.73	1.25
Apr-06	6.29	5.06	1.23
May-06	6.42	5.20	1.22
Jun-06	6.40	5.15	1.25
Jul-06	6.37	5.13	1.24
Aug-06	6.20	5.00	1.20
Sep-06	6.00	4.85	1.15
Oct-06	5.98	4.85	1.13
Nov-06	5.80	4.69	1.11
Dec-06	5.81	4.68	1.13
Jan-07	5.96	4.85	1.11
Feb-07	5.90	4.82	1.08
Mar-07	5.85	4.72	1.13
Apr-07	5.97	4.87	1.10
May-07	5.99	4.90	1.09
Jun-07	6.30	5.20	1.10
Jul-07	6.25	5.11	1.14
Aug-07	6.24	4.93	1.31
Sep-07	6.18	4.79	1.39
Oct-07	6.11	4.77	1.34
Nov-07	5.97	4.52	1.45
Dec-07	6.16	4.53	1.63
Jan-08	6.02	4.33	1.69
Feb-08	6.22	4.52	1.70
Mar-08	6.21	4.39	1.82
Apr-08	6.29	4.44	1.85
May-08	6.28	4.60	1.68
Jun-08	6.38	4.69	1.69
Jul-08	6.40	4.57	1.83
Aug-08	6.37	4.50	1.87
Most Recent 12 Month Average			1.66

Sources: Mergent Bond Record (Utility Rates); www.federalreserve.gov (Treasury Rates).

Trends & Projections

Rocky Mountain Power
Exhibit No. 3 Page 3 of 3
Case No. PAC-F-08-07
Witness: Samuel C. Hadaway

Economic Indicators

Seasonally Adjusted Annual Rates — Dollar Figures in Billions

	Annual % Change				E2009				E2008				E2009			
	2007	E2008	E2009	2007	E2008	E2009	2007	E2008	E2009	2007	E2008	E2009	2007	E2008	E2009	
Gross Domestic Product																
GDP (current dollars)	\$13,807.6	\$14,354.3	\$14,795.2	4.8	4.0	3.1	\$14,031.2	\$14,150.8	\$14,256.5	\$14,453.5	\$14,556.6	\$14,602.3	\$14,699.7	\$14,854.8		
Annual rate of increase (%)	4.8	4.0	3.1	-	-	-	2.3	3.5	3.0	5.6	2.9	1.3	2.7	4.3		
Annual rate of increase—real GDP (%)	2.0	1.7	0.9	-	-	-	(0.2)	0.9	1.9	2.1	(0.2)	(1.1)	2.2	2.4		
Annual rate of increase—GDP deflator (%)	2.7	2.3	2.1	-	-	-	2.8	2.6	1.1	3.2	3.1	2.4	0.4	1.9		
* Components of Real GDP																
Personal consumption expenditures	\$8,252.8	\$8,342.0	\$8,370.3	2.8	1.1	0.3	\$8,298.2	\$8,316.1	\$8,347.5	\$8,362.2	\$8,342.1	\$8,320.8	\$8,348.7	\$8,379.5		
% change	2.8	1.1	0.3	-	-	-	1.0	0.9	1.5	0.7	(1.0)	1.3	1.5			
Durable goods	1,242.4	1,218.8	1,180.9	4.8	(1.9)	(3.1)	1,250.6	1,237.0	1,227.7	1,214.0	1,196.5	1,167.6	1,175.1	1,177.5		
Non-durable goods	2,392.6	2,415.0	2,414.8	2.5	0.9	(0.0)	2,400.2	2,397.9	2,421.7	2,426.5	2,413.9	2,407.7	2,417.6			
Services	4,646.2	4,724.6	4,777.0	2.6	1.7	1.1	4,676.1	4,704.3	4,717.4	4,735.8	4,740.8	4,749.5	4,767.2	4,785.0		
Nonresidential fixed investment	1,383.0	1,434.5	1,408.5	4.9	3.7	(1.8)	1,414.7	1,423.1	1,431.3	1,432.3	1,451.3	1,411.7	1,400.8	1,403.8		
% change	4.9	3.7	(1.8)	-	-	-	3.4	2.4	2.3	0.3	5.4	(10.5)	(3.1)	0.9		
Producers durable equipment	1,078.9	1,089.1	1,105.4	1.7	0.9	1.5	1,090.1	1,088.6	1,079.2	1,076.0	1,112.6	1,090.2	1,094.7	1,108.7		
Residential fixed investment	444.9	352.0	336.7	(18.1)	(20.9)	(4.4)	403.0	374.6	358.6	345.1	329.9	322.1	328.5	340.1		
% change	(18.1)	(20.9)	(4.4)	-	-	-	(27.3)	(25.4)	(16.0)	(14.3)	(16.5)	(9.1)	8.1	14.9		
Net change in business inventories	2,012.1	2,053.7	2,048.3	2.1	2.1	(0.3)	(8.1)	(10.2)	(62.2)	(34.5)	(29.6)	(31.0)	(28.4)	(14.7)		
Gov't purchases of goods & services	752.9	785.6	799.7	1.6	4.3	1.8	761.7	772.6	785.2	789.6	795.0	798.8	801.1	800.3		
Federal	1,259.0	1,268.8	1,250.4	2.3	0.8	(1.5)	1,267.5	1,266.7	1,271.7	1,271.0	1,265.8	1,260.1	1,252.7	1,246.6		
State & local	(546.5)	(397.4)	(289.4)	(8.4)	8.6	7.4	(484.5)	(462.0)	(395.2)	(371.3)	(361.2)	(325.9)	(285.4)	(286.5)		
Net exports	1,425.9	1,548.3	1,862.3	8.4	8.6	7.4	1,482.1	1,500.6	1,534.1	1,565.8	1,592.7	1,617.1	1,647.0	1,677.9		
Exports	1,972.4	1,945.7	1,951.6	2.2	(1.4)	0.3	1,966.5	1,962.6	1,929.2	1,937.1	1,953.9	1,943.0	1,932.5	1,946.4		
Imports	\$11,663.3	\$12,168.8	\$12,573.0	6.1	4.3	3.3	\$11,872.1	\$11,981.2	\$12,195.7	\$12,209.8	\$12,288.3	\$12,399.0	\$12,503.4	\$12,627.4		
Personal income	10,170.5	10,668.2	11,008.2	5.5	4.9	3.2	10,351.5	10,440.0	10,833.4	10,677.2	10,722.4	10,863.5	10,953.2	11,055.5		
Disposable personal income	0.6	0.5	0.6	-	-	-	0.4	0.3	2.6	(0.3)	0.2	0.6	0.7			
Savings rate (%)	1,896.3	1,764.8	1,815.5	0.7	(6.4)	2.9	1,894.3	1,750.9	1,781.8	1,800.1	1,726.4	1,827.7	1,783.5	1,819.1		
Corporate profits before taxes	1,435.9	1,356.1	1,378.2	2.2	(5.6)	1.6	1,460.9	1,348.0	1,373.4	1,382.1	1,321.0	1,389.5	1,355.7	1,380.4		
Corporate profits after taxes	66.18	66.59	64.66	(18.8)	0.6	(2.9)	66.18	60.39	55.42	58.09	66.59	68.16	67.35	66.29		
‡ Earnings per share (S&P 500)																
† Prices & Interest Rates																
Consumer price index	2.9	4.8	2.9	-	-	-	5.0	4.3	5.0	6.7	5.6	2.5	(1.0)	1.6		
Treasury bills	4.4	1.8	2.4	-	-	-	3.4	2.2	1.6	1.7	1.8	1.9	2.0	2.5		
10-yr notes	4.6	3.9	4.5	-	-	-	4.3	3.7	3.9	3.9	4.0	4.1	4.2	4.6		
30-yr bonds	4.8	4.5	4.9	-	-	-	4.6	4.4	4.6	4.5	4.5	4.6	4.7	5.0		
New issue rate—corporate bonds	5.6	5.6	6.1	-	-	-	5.5	5.5	5.6	5.6	5.7	5.8	5.9	6.2		
Other Key Indicators																
Housing starts (1,000 units SAAR)	1,340.7	969.6	1,079.1	(26.0)	(27.7)	11.3	1,151.3	1,053.0	1,015.7	903.4	906.2	930.8	1,034.7	1,123.6		
Auto & truck sales (1,000,000 units)	16.1	14.2	14.1	(2.5)	(11.5)	(0.8)	16.0	15.2	14.1	13.4	14.2	13.7	14.1	14.1		
Unemployment rate (%)	4.6	5.4	6.2	-	-	-	4.8	4.9	5.3	5.6	5.8	6.0	6.2	6.2		
‡ Trailing 4 quarters. †Average for period. ‡Quarterly % changes at quarterly rates. This forecast prepared by Standard & Poor's.	(5.6)	(8.5)	(0.0)	-	-	-	(17.9)	(6.9)	(6.0)	5.2	(7.4)	0.4	1.7	3.4		

Note: Annual changes are from prior year and quarterly changes are from prior quarter. Figures may not add to totals because of rounding. A—Advance data. P—Preliminary. E—Estimated. R—Revised. *1986 Chain-weighted dollars. **Current dollars. ‡Trailing 4 quarters. †Average for period. ‡Quarterly % changes at quarterly rates. This forecast prepared by Standard & Poor's.

Rocky Mountain Power
 GDP Growth Rate Forecast

	Nominal GDP	% Change	GDP Price Deflator	% Change	CPI	% Change
1947	244.2		15.5		22.3	
1948	269.2	10.2%	16.4	5.6%	24.1	7.7%
1949	267.3	-0.7%	16.4	-0.2%	23.8	-1.0%
1950	293.8	9.9%	16.5	1.0%	24.1	1.1%
1951	339.3	15.5%	17.7	7.2%	26.0	7.9%
1952	358.4	5.6%	18.0	1.7%	26.6	2.3%
1953	379.4	5.9%	18.2	1.2%	26.8	0.8%
1954	380.4	0.3%	18.4	1.0%	26.9	0.3%
1955	414.8	9.0%	18.7	1.8%	26.8	-0.2%
1956	437.5	5.5%	19.4	3.5%	27.2	1.4%
1957	461.1	5.4%	20.0	3.3%	28.1	3.4%
1958	467.2	1.3%	20.5	2.3%	28.9	2.7%
1959	506.6	8.4%	20.8	1.2%	29.2	1.0%
1960	526.4	3.9%	21.0	1.4%	29.6	1.5%
1961	544.7	3.5%	21.3	1.1%	29.9	1.0%
1962	585.6	7.5%	21.6	1.4%	30.3	1.2%
1963	617.8	5.5%	21.8	1.1%	30.6	1.3%
1964	663.6	7.4%	22.1	1.5%	31.0	1.3%
1965	719.1	8.4%	22.5	1.8%	31.6	1.6%
1966	787.8	9.5%	23.2	2.8%	32.5	3.0%
1967	832.6	5.7%	23.9	3.1%	33.4	2.7%
1968	910.0	9.3%	24.9	4.3%	34.8	4.2%
1969	984.6	8.2%	26.1	5.0%	36.7	5.4%
1970	1038.5	5.5%	27.5	5.3%	38.8	5.9%
1971	1127.1	8.5%	28.9	5.0%	40.5	4.2%
1972	1238.3	9.9%	30.2	4.3%	41.8	3.3%
1973	1382.7	11.7%	31.8	5.6%	44.4	6.3%
1974	1500.0	8.5%	34.7	9.1%	49.3	11.0%
1975	1638.3	9.2%	38.0	9.4%	53.8	9.1%
1976	1825.3	11.4%	40.2	5.8%	56.9	5.8%
1977	2030.9	11.3%	42.7	6.3%	60.6	6.5%
1978	2294.7	13.0%	45.7	7.0%	65.2	7.6%
1979	2563.3	11.7%	49.5	8.3%	72.6	11.3%
1980	2789.5	8.8%	54.0	9.1%	82.4	13.5%
1981	3128.4	12.1%	59.1	9.4%	90.9	10.4%
1982	3255.0	4.0%	62.7	6.1%	96.5	6.2%
1983	3536.7	8.7%	65.2	3.9%	99.6	3.2%
1984	3933.2	11.2%	67.6	3.8%	103.9	4.4%
1985	4220.3	7.3%	69.7	3.0%	107.6	3.5%
1986	4462.8	5.7%	71.2	2.2%	109.7	1.9%
1987	4739.5	6.2%	73.2	2.7%	113.6	3.6%
1988	5103.8	7.7%	75.7	3.4%	118.3	4.1%
1989	5484.4	7.5%	78.6	3.8%	123.9	4.8%
1990	5803.1	5.8%	81.6	3.9%	130.7	5.4%
1991	5995.9	3.3%	84.4	3.5%	136.2	4.2%
1992	6337.8	5.7%	86.4	2.3%	140.3	3.0%
1993	6657.4	5.0%	88.4	2.3%	144.5	3.0%
1994	7072.2	6.2%	90.3	2.1%	148.2	2.6%
1995	7397.7	4.6%	92.1	2.0%	152.4	2.8%
1996	7816.8	5.7%	93.8	1.9%	156.9	2.9%
1997	8304.3	6.2%	95.4	1.7%	160.5	2.3%
1998	8747.0	5.3%	96.5	1.1%	163.0	1.5%
1999	9268.4	6.0%	97.9	1.4%	166.6	2.2%
2000	9817.0	5.9%	100.0	2.2%	172.2	3.4%
2001	10128.0	3.2%	102.4	2.4%	177.0	2.8%
2002	10469.6	3.4%	104.2	1.7%	179.9	1.6%
2003	10960.8	4.7%	106.4	2.1%	184.0	2.3%
2004	11685.9	6.6%	109.5	2.9%	188.9	2.7%
2005	12433.9	6.4%	113.0	3.2%	195.3	3.4%
2006	13194.7	6.1%	116.6	3.2%	201.6	3.2%
2007	13843.0	4.9%	119.7	2.7%	207.3	2.9%
10-Year Average		5.2%		2.3%		2.6%
20-Year Average		5.5%		2.5%		3.1%
30-Year Average		6.6%		3.5%		4.2%
40-Year Average		7.3%		4.1%		4.7%
50-Year Average		7.1%		3.7%		4.1%
60-Year Average		7.0%		3.5%		3.8%
Average of Periods		6.5%		3.3%		3.8%

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IDAHO PUBLIC
UTILITIES COMMISSION

Case No. PAC-E-08-07

Exhibit No. 5

Witness: Samuel C. Hadaway

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

ROCKY MOUNTAIN POWER

Exhibit Accompanying Direct Testimony of Samuel C. Hadaway

Discounted Cashflow Analysis

September 2008

Rocky Mountain Power
Discounted Cash Flow Analysis
Summary Of DCF Model Results

Company	Constant Growth DCF Model Analysts' Growth Rates	Constant Growth DCF Model Long-Term GDP Growth	Low Near-Term Growth Two-Stage Growth DCF Model
1 ALLETE	8.8%	10.8%	10.4%
2 Alliant Energy Co.	10.3%	11.0%	11.1%
3 Con. Edison	8.4%	12.5%	11.6%
4 DTE Energy Co.	10.8%	11.5%	11.0%
5 Edison Internat.	10.1%	9.2%	9.2%
6 Entergy Corp.	14.6%	9.7%	10.0%
7 FPL Group, Inc.	12.9%	9.5%	9.5%
8 IDACORP	8.7%	10.5%	9.9%
9 NSTAR	11.2%	11.1%	11.1%
10 PG&E Corp.	11.0%	10.8%	10.8%
11 Portland General	11.1%	10.8%	10.7%
12 Progress Energy	11.2%	12.4%	11.6%
13 Southern Co.	10.0%	11.3%	11.1%
14 Vectren Corp.	9.7%	11.1%	10.6%
15 Wisconsin Energy	11.7%	9.2%	9.3%
16 Xcel Energy Inc.	11.1%	11.3%	10.8%
GROUP AVERAGE	10.7%	10.8%	10.6%
GROUP MEDIAN	10.9%	10.9%	10.7%

Sources: Value Line Investment Survey, Electric Utility (East), Aug 29, 2008; (Central), Jun 27, 2008; (West), Aug 8, 2008.

NOTE: SEE PAGE 5 OF THIS SCHEDULE FOR FURTHER EXPLANATION OF EACH COLUMN.

**Rocky Mountain Power
Constant Growth DCF Model
Analysts' Growth Rates**

Company	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Recent Price(P0)	Next Year's Div(D1)	Dividend Yield	Value Line	Analysts' Estimated Growth		Average Growth (Cols 4-6)	ROE K=Div Yld+G (Cols 3+7)
					Zacks	Thomson		
1 ALLETE	42.10	1.80	4.28%	2.50%	5.00%	6.00%	4.50%	8.8%
2 Alliant Energy Co.	34.06	1.53	4.49%	6.00%	6.10%	5.40%	5.83%	10.3%
3 Con. Edison	39.55	2.36	5.97%	1.00%	3.20%	3.00%	2.40%	8.4%
4 DTE Energy Co.	42.34	2.12	5.01%	5.00%	6.30%	6.00%	5.77%	10.8%
5 Edison Internat.	49.22	1.34	2.72%	5.00%	8.80%	8.45%	7.42%	10.1%
6 Entergy Corp.	112.15	3.60	3.21%	10.00%	12.00%	12.18%	11.39%	14.6%
7 FPL Group, Inc.	64.10	1.92	3.00%	9.50%	10.30%	9.84%	9.88%	12.9%
8 IDACORP	29.73	1.20	4.04%	2.00%	6.00%	6.00%	4.67%	8.7%
9 NSTAR	33.23	1.53	4.60%	7.50%	6.40%	6.00%	6.63%	11.2%
10 PG&E Corp.	39.10	1.68	4.30%	5.00%	7.80%	7.24%	6.68%	11.0%
11 Portland General	23.69	1.01	4.26%	7.00%	7.00%	6.65%	6.88%	11.1%
12 Progress Energy	42.33	2.49	5.88%	5.00%	4.70%	6.12%	5.27%	11.2%
13 Southern Co.	35.74	1.73	4.84%	5.50%	4.70%	5.36%	5.19%	10.0%
14 Vectren Corp.	29.58	1.35	4.56%	3.50%	6.10%	5.77%	5.12%	9.7%
15 Wisconsin Energy	45.53	1.24	2.72%	8.00%	9.60%	9.19%	8.93%	11.7%
16 Xcel Energy Inc.	20.29	0.97	4.78%	7.50%	5.40%	6.12%	6.34%	11.1%
GROUP AVERAGE	42.67	1.74	4.29%	5.63%	6.84%	6.63%	6.43%	10.7%
GROUP MEDIAN			4.39%					10.9%

Sources: Value Line Investment Survey, Electric Utility (East), Aug 29, 2008; (Central), Jun 27, 2008; (West), Aug 8, 2008.

NOTE: SEE PAGE 5 OF THIS SCHEDULE FOR FURTHER EXPLANATION OF EACH COLUMN.

**Rocky Mountain Power
Constant Growth DCF Model
Long-Term GDP Growth**

	(9)	(10)	(11)	(12)	(13)
Company	Recent Price(P0)	Next Year's Div(D1)	Dividend Yield	GDP Growth	ROE K=Div Yld+G (Cols 11+12)
1 ALLETE	42.10	1.80	4.28%	6.50%	10.8%
2 Alliant Energy Co.	34.06	1.53	4.49%	6.50%	11.0%
3 Con. Edison	39.55	2.36	5.97%	6.50%	12.5%
4 DTE Energy Co.	42.34	2.12	5.01%	6.50%	11.5%
5 Edison Internat.	49.22	1.34	2.72%	6.50%	9.2%
6 Entergy Corp.	112.15	3.60	3.21%	6.50%	9.7%
7 FPL Group, Inc.	64.10	1.92	3.00%	6.50%	9.5%
8 IDACORP	29.73	1.20	4.04%	6.50%	10.5%
9 NSTAR	33.23	1.53	4.60%	6.50%	11.1%
10 PG&E Corp.	39.10	1.68	4.30%	6.50%	10.8%
11 Portland General	23.69	1.01	4.26%	6.50%	10.8%
12 Progress Energy	42.33	2.49	5.88%	6.50%	12.4%
13 Southern Co.	35.74	1.73	4.84%	6.50%	11.3%
14 Vectren Corp.	29.58	1.35	4.56%	6.50%	11.1%
15 Wisconsin Energy	45.53	1.24	2.72%	6.50%	9.2%
16 Xcel Energy Inc.	20.29	0.97	4.78%	6.50%	11.3%
GROUP AVERAGE	42.67	1.74	4.29%	6.50%	10.8%
GROUP MEDIAN			4.39%		10.9%

Sources: Value Line Investment Survey, Electric Utility (East), Aug 29, 2008; (Central), Jun 27, 2008; (West), Aug 8, 2008.

NOTE: SEE PAGE 5 OF THIS SCHEDULE FOR FURTHER EXPLANATION OF EACH COLUMN.

Rocky Mountain Power
Low Near-Term Growth
Two-Stage Growth DCF Model

Company	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)
	Next Year's Div	2012 Div	Annual Change to 2012	Recent Price	Year 1 Div	CASH FLOWS					ROE=Internal Rate of Return (Yrs 0-150)
						Year 2 Div	Year 3 Div	Year 4 Div	Year 5 Div	Year 5-150 Div Growth	
1 ALLETE	1.80	2.00	0.07	-42.10	1.80	1.87	1.93	2.00	2.13	2.13	10.4%
2 Alliant Energy Co.	1.53	1.92	0.13	-34.06	1.53	1.66	1.79	1.92	2.04	2.04	11.1%
3 Con. Edison	2.36	2.42	0.02	-39.55	2.36	2.38	2.40	2.42	2.58	2.58	11.6%
4 DTE Energy Co.	2.12	2.30	0.06	-42.34	2.12	2.18	2.24	2.30	2.45	2.45	11.0%
5 Edison Internat.	1.34	1.64	0.10	-49.22	1.34	1.44	1.54	1.64	1.75	1.75	9.2%
6 Entergy Corp.	3.60	4.80	0.40	-112.15	3.60	4.00	4.40	4.80	5.11	5.11	10.0%
7 FPL Group, Inc.	1.92	2.34	0.14	-64.10	1.92	2.06	2.20	2.34	2.49	2.49	9.5%
8 IDACORP	1.20	1.20	0.00	-29.73	1.20	1.20	1.20	1.20	1.28	1.28	9.9%
9 NSTAR	1.53	1.85	0.11	-33.23	1.53	1.64	1.74	1.85	1.97	1.97	11.1%
10 PG&E Corp.	1.68	2.04	0.12	-39.10	1.68	1.80	1.92	2.04	2.17	2.17	10.8%
11 Portland General	1.01	1.20	0.06	-23.69	1.01	1.07	1.14	1.20	1.28	1.28	10.7%
12 Progress Energy	2.49	2.55	0.02	-42.33	2.49	2.51	2.53	2.55	2.72	2.72	11.6%
13 Southern Co.	1.73	2.00	0.09	-35.74	1.73	1.82	1.91	2.00	2.13	2.13	11.1%
14 Vectren Corp.	1.35	1.47	0.04	-29.58	1.35	1.39	1.43	1.47	1.57	1.57	10.6%
15 Wisconsin Energy	1.24	1.60	0.12	-45.53	1.24	1.36	1.48	1.60	1.70	1.70	9.3%
16 Xcel Energy Inc.	0.97	1.06	0.03	-20.29	0.97	1.00	1.03	1.06	1.13	1.13	10.8%
GROUP AVERAGE											10.6%
GROUP MEDIAN											10.7%

Sources: Value Line Investment Survey, Electric Utility (East), Aug 29, 2008; (Central), Jun 27, 2008; (West), Aug 8, 2008.

NOTE: SEE PAGE 5 OF THIS SCHEDULE FOR FURTHER EXPLANATION OF EACH COLUMN.

Rocky Mountain Power
Discounted Cash Flow Analysis
Column Descriptions

Column 1: Three-month Average Price per Share (Jun 2008-Aug 2008)	Column 13: Column 11 Plus Column 12
Column 2: Estimated 2009 Dividends per Share from Value Line	Column 14: See Column 2
Column 3: Column 2 Divided by Column 1	Column 15: Estimated 2012 Dividends per Share from Value Line
Column 4: "Est'd 05-07 to 11-13" Earnings Growth Reported by Value Line	Column 16: (Column 15 Minus Column 14) Divided by Three
Column 5: "Next 5 Years" Company Growth Estimate as Reported by Zacks.com	Column 17: See Column 1
Column 6: "Next 5 Years (per annum) Growth Estimate Reported by Thomson Financial Network (at Yahoo Finance)	Column 18: See Column 14
Column 7: Average of Columns 4-6	Column 19: Column 18 Plus Column 16
Column 8: Column 3 Plus Column 7	Column 20: Column 19 Plus Column 19
Column 9: See Column 1	Column 21: Column 20 Plus Column 16
Column 10: See Column 2	Column 22: Column 21 Increased by the Growth Rate Shown in Column 23
Column 11: Column 10 Divided by Column 9	Column 23: See Column 12
Column 12: Average of GDP Growth During the Last 10 year, 20 year, 30 year, 40 year, 50 year, and 60 year growth periods. See Exhibit RMP__(SCH-3)	Column 24: The Internal Rate of Return of the Cash Flows in Columns 17-22 along with the Dividends for the Years 6-150 Implied by the Growth Rates shown in Column 23

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IDAHO PUBLIC
UTILITIES COMMISSION

Case No. PAC-E-08-07

Exhibit No. 6

Witness: Samuel C. Hadaway

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

ROCKY MOUNTAIN POWER

Exhibit Accompanying Direct Testimony of Samuel C. Hadaway

Risk Premium Analysis

September 2008

Rocky Mountain Power
Risk Premium Analysis

	MOODY'S AVERAGE PUBLIC UTILITY BOND YIELD (1)	AUTHORIZED ELECTRIC RETURNS (2)	INDICATED RISK PREMIUM
1980	13.15%	14.23%	1.08%
1981	15.62%	15.22%	-0.40%
1982	15.33%	15.78%	0.45%
1983	13.31%	15.36%	2.05%
1984	14.03%	15.32%	1.29%
1985	12.29%	15.20%	2.91%
1986	9.46%	13.93%	4.47%
1987	9.98%	12.99%	3.01%
1988	10.45%	12.79%	2.34%
1989	9.66%	12.97%	3.31%
1990	9.76%	12.70%	2.94%
1991	9.21%	12.55%	3.34%
1992	8.57%	12.09%	3.52%
1993	7.56%	11.41%	3.85%
1994	8.30%	11.34%	3.04%
1995	7.91%	11.55%	3.64%
1996	7.74%	11.39%	3.65%
1997	7.63%	11.40%	3.77%
1998	7.00%	11.66%	4.66%
1999	7.55%	10.77%	3.22%
2000	8.14%	11.43%	3.29%
2001	7.72%	11.09%	3.37%
2002	7.53%	11.16%	3.63%
2003	6.61%	10.97%	4.36%
2004	6.20%	10.75%	4.55%
2005	5.67%	10.54%	4.87%
2006	6.08%	10.36%	4.28%
2007	6.11%	10.36%	4.25%
AVERAGE	9.23%	12.40%	3.17%

INDICATED COST OF EQUITY

PROJECTED SINGLE-A UTILITY BOND YIELD*	6.56%
MOODY'S AVG ANNUAL YIELD DURING STUDY	9.23%
INTEREST RATE DIFFERENCE	-2.67%

INTEREST RATE CHANGE COEFFICIENT	-41.83%
ADJUSTMENT TO AVG RISK PREMIUM	1.12%

BASIC RISK PREMIUM	3.17%
INTEREST RATE ADJUSTMENT	1.12%
EQUITY RISK PREMIUM	4.29%

PROJECTED SINGLE-A UTILITY BOND YIELD*	6.56%
INDICATED EQUITY RETURN	10.85%

(1) Moody's Investors Service

(2) Regulatory Focus, Regulatory Research Associates, Inc.

*Projected single-A bond yield is 166 basis points over projected long-term Treasury bond rate of 4.9% from Exhibit RMP__(SCH-2), p. 3. The single-A spread is for the 12 months ended Aug 2008 from Exhibit RMP__(SCH-2), p. 2.

Rocky Mountain Power
Risk Premium Analysis

