

Docket No. 09-035-23

Utah Office of Consumer Services Witness:

Daniel J. Lawton

Exhibits OCS 1.1 through 1.10

September 17, 2009

BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

In the Matter of the Application of Rocky Mountain Power for Authority to Increase Its Retail Electric Utility Services Rates In Utah and for Approval of its Proposed Service Schedules and Electric Service Regulations §
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Docket No. 09-035-23

**Direct Rate of Return
Testimony of Daniel J. Lawton
For the Utah Office of
Consumer Services**

September 17, 2009

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**DIRECT TESTIMONY OF
DANIEL J. LAWTON**

1 **SECTION I: INTRODUCTION/BACKGROUND/SUMMARY**

2 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

3 A. My name is Daniel J. Lawton. My business address is 701 Brazos, Suite 500, Austin,
4 Texas 78701.

5 **Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND WORK
6 EXPERIENCE.**

7 A. I have been working in the utility consulting business as an economist since 1983.
8 Consulting engagements have included electric utility load and revenue forecasting, cost
9 of capital analyses, revenue requirements/cost of service reviews, and rate design
10 analyses in litigated rate proceedings before federal, state and local regulatory
11 authorities. I have worked with municipal utilities developing electric rate cost of
12 service studies for reviewing and setting rates. In addition, I have a law practice based
13 in Austin, Texas. My main areas of legal practice include administrative law
14 representing municipalities in electric and gas rate proceedings and other litigation and
15 contract matters. I have included a brief description of my relevant educational
16 background and professional work experience in Exhibit OCS 1.1.

17 **Q. HAVE YOU PREVIOUSLY FILED TESTIMONY IN RATE PROCEEDINGS?**

18 A. Yes. A list of cases where I have previously filed testimony is included in my Exhibit
19 OCS 1.1.

20 **Q. ON WHOSE BEHALF ARE YOU FILING TESTIMONY IN THIS
21 PROCEEDING?**

22 A. I have been retained to review Rocky Mountain Power's ("Company" or "RMP") cost of
23 capital request on behalf of the Utah Office of Consumer Services ("OCS").

24 In addition, I will address the risk reduction impacts associated with the proposed
25 Energy Cost Adjustment Mechanism (ECAM) filed in Docket No. 09-035-15, and the
26 impact of new legislation (Utah Code Anno. §54-7-13.4) allowing specific investment
27 recovery for major plant additions.

28 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?**

29 A. The purpose of my testimony in this proceeding is to address the Company's requested
30 overall cost of capital. I will address the Company's requested rate of return, capital
31 structure, and cost rates for equity, debt and preferred stock, which is presented in the
32 direct testimony of cost of capital witnesses, Dr. Samuel Hadaway and Mr. Bruce
33 Williams.

34 In addition, I will be addressing other factors that impact the Company's risk and return.
35 These issues are raised in the direct testimony of Mr. A. Richard Walje. These factors
36 include (i) fuel cost recovery and (ii) rate mechanisms for including incremental
37 investment recovery. These factors impact the Company by lowering investor risks by
38 assuring revenue recovery, eliminating risk associated with volatile natural gas and
39 wholesale power cost recovery and eliminate or limit regulatory lag and earnings erosion
40 through accelerated investment recovery through single-issue rate recovery proceedings.

41 **Q. WHAT MATERIALS DID YOU REVIEW AND RELY ON FOR THIS**
42 **TESTIMONY?**

43 A. I have reviewed the Company's testimony, Company responses to interrogatories, Value
44 Line Investment Survey ("Value Line"), financial reports of the Company, and various
45 other financial information available in the public domain. When relying on other
46 sources, I have referenced such sources in my testimony and on attached schedules and
47 included copies or summaries in my attached schedules or workpapers.

48 **Q. PLEASE SUMMARIZE YOUR FINDINGS AND CONCLUSIONS IN THIS**
49 **CASE.**

50 A. My analysis of the Company's required cost of capital results in a recommendation of a
51 10% return on equity for shareholders and an overall return to be earned on rate base

52 investment of 8.03%. In my opinion, these return levels are consistent with current
53 capital costs and consistent with reasonable rates for consumers. My analyses of the
54 Company's 8.54% overall cost of capital and 11.0% return on equity indicate that the
55 Company request is overstated given current market costs of capital.

56 Based on my analyses (which are fully explained in the following pages), I make the
57 following conclusions and recommendations:

58 (i) The Company's required return on equity is 10.0%;

59 (ii) The Company's overall cost of capital to be earned on rate base investment
60 should be set at 8.03% for setting just and reasonable rates for Utah customers in this
61 proceeding;

62 (iii) The Company has failed to consider the risk reduction impacts associated with
63 fuel cost recovery and incremental capital cost recovery. When these factors are
64 considered, the equity return consideration should reflect the lower end of the
65 reasonable return range;

66 (iv) RMP's proposed 11.0% return for equity shareholders is an overstatement of the
67 required return on equity to hold and attract equity capital; and

68 (v) The Company's proposed 8.54% overall return on investment is overstated and
69 should not be adopted as representative of the Company's cost of capital requirements.

70 **SECTION II: CRITIQUE OF COMPANY'S POSITION**

71 **Q. PLEASE SUMMARIZE THE COMPANY'S PROPOSED RATE REQUEST IN**
72 **THIS CASE.**

73 A. Based on a review of the testimony and the Company's "Application For General Rate
74 Increase", RMP's request can be summarized as an annual increase of about \$66.884
75 million¹ for Utah customers. The request is based on a forecasted test year for the
76 twelve months ending June 30, 2010.² The Company has requested an overall cost of

¹ Company "Application for General Rate Increase" at 3.

² *Id.*

77 capital of 8.538%³ to be earned on a rate base investment level of \$4,690,862,116.⁴ The
78 Company is requesting a return for equity shareholders of 11.0%.⁵

79 The Company asserts that the need for the rate increase is driven by the "...significant
80 level of capital investment the Company is making..." on the system.⁶

81 **Q. IN YOUR REVIEW OF THE COMPANY'S FILING, HAVE YOU FOUND THE**
82 **COMPANY'S REQUEST TO BE OVERSTATED?**

83

84 A. Yes. Keeping in mind my analyses are limited to the Company's cost of capital, my
85 review indicates that the Company's return request is overstated and if adopted would
86 lead to excessive charges to consumers. Specifically, the Company's requested equity
87 return of 11.0% contained in Dr. Hadaway's testimony exceeds the current cost of
88 equity capital in the market.

89

90 **Q. DO YOU HAVE ANY GENERAL COMMENTS ON DR. HADAWAY'S**
91 **ANALYSES?**

92 A. Yes. First, Dr. Hadaway's recommendation in this case of an 11.0% return on equity is
93 an overstatement of the cost of equity. Dr. Hadaway's return is overstated due to
94 reliance on outdated data and his reliance on overstated GDP growth data. Such a return
95 if adopted would lead to excessive, unjust and unreasonable rates for customers.

96 As I discuss below, Dr. Hadaway's results are overstated for the following reasons:

97 1. The growth rates employed for the constant growth DCF averaging 6.02% are
98 overstated, outdated and fail to take into account declining expectations of growth
99 during an economic slowdown or recession.

100 2. The growth rate employed for the long-term GDP growth DCF of 6.2% fails to
101 reflect investor expectations and should be in the range of 5.0% reflecting more
102 recent history.

³ Direct Testimony of Bruce Williams at 2.

⁴ Exhibit RMP_(SRM-2) Page 1.1.

⁵ Application at 4.

⁶ Direct Testimony of A. Richard Walje at 5:225-227.

103 3. The long-term growth rates employed in Dr. Hadaway's two-stage DCF suffer from
104 the same infirmities as discussed in (2) above.

105 4. Dr. Hadaway's risk premium analyses ranging from 10.77% to 11.97% are
106 significantly overstated. These estimates are overstated due to his extremely high
107 estimates of single-A debt costs. When corrected for a realistic risk premium level
108 and/or corrected for a more reasonable estimate of single-A rated debt yield – these
109 risk premium results like the DCF analyses are dramatically reduced.

110 Overall, despite Dr. Hadaway's attempts to support an equity return estimate of 11.0%
111 the facts just do not support his analysis.

112 **Q. EARLIER YOU STATED THAT DR. HADAWAY'S CONSTANT GROWTH**
113 **DCF ANALYSIS INCLUDES OVERSTATED GROWTH ESTIMATES. PLEASE**
114 **EXPLAIN.**

115 A. Dr. Hadaway has relied on earnings per share forecasts of growth from Value Line,
116 Zacks and Yahoo Finance/Thomson to arrive at his 6.02% average growth estimate. At
117 this time, the Zacks and Thomson forecast estimates are overstated by about 20 basis
118 points. Given the economic slowdown one would expect growth forecasts to decline. I
119 expect these growth estimates will continue to decline over the next few months.
120 Further, Dr. Hadaway's dividend yield estimates of 5.5% are also overstated by about 50
121 basis points.

122 **Q. YOU STATED THAT DR. HADAWAY'S USE OF A 6.20% GDP GROWTH**
123 **RATE OVERSTATES THAT COST OF CAPITAL. PLEASE EXPLAIN.**

124 A. As a long-term growth measure of the future, relying on the GDP historical growth
125 measure as one of the measures to predict future earnings growth is not unreasonable.
126 So long as future growth in GDP approaches the historical GDP measure, then the GDP
127 growth rate proxy could be a reasonable estimate. However, caution should be taken in
128 relying on historical GDP growth as the sole measure of expected growth in earnings.

129 I also differ with Dr. Hadaway in his change in methodology in calculating the GDP
130 measure. In previous testimony such as the PacifiCorp rate case, Docket No. 03-2035-

131 02, filed in May 2003, Dr. Hadaway employed a simple 20-year historical average of
132 GDP growth for his long-term earnings growth proxy, which would produce a 5.1%
133 GDP growth estimate. Since the 2003 case, Dr. Hadaway changed his methodology for
134 calculating the historical GDP long-term growth rate. Rather than using the 20-year
135 GDP average of 5.1%, Dr. Hadaway now takes an average of six different GDP growth
136 period averages as illustrated in Table 1 below:

TABLE 1⁷
SUMMARY GDP GROWTH AVERAGES

10-year GDP average	4.8%
20-year GDP average	5.1%
30-year GDP average	6.1%
40-year GDP average	7.1%
50-year GDP average	7.0%
60-year GDP average	6.9%
Average of periods	6.2%

137 In other words, Dr. Hadaway's new methodology averages the historical averages. Dr.
138 Hadaway provides no explanation or basis for his changed methodology, the net impact
139 of which is to increase the long-term growth estimate from the 20-year average of 5.1%
140 to 6.2%, a 90 basis point increase.

141 **Q. DO YOU RECOMMEND THE COMMISSION ACCEPT DR. HADAWAY'S**
142 **NEW METHODOLOGY FOR COMPUTING LONG TERM GROWTH?**

143
144 A. No. A 20-year period is certainly a sufficiently long time period to smooth aberrations
145 and/or outliers to project into the future. I find no theoretical (economic or
146 mathematical) reason to employ an average of the 10, 20, 30, 40, 50 and 60 year
147 averages. It could be argued that more recent GDP growth data is more important, and
148 the 10-year GDP average of 4.8% would be the best GDP proxy of growth. This may be

⁷ Dr. Hadaway Direct Testimony Exhibit RMP_ (SCH-3).

149 especially true given recent Federal Reserve projections of a much lower and declining
 150 GDP growth. In my opinion, if the GDP average is to be used as one of the growth rate
 151 estimates, then the 20-year average of 5.1% is a reasonable compromise for
 152 consideration in this case. This growth estimate is consistent with analyst estimates for
 153 earnings and reflects current expectations of declining GDP growth.

154 **Q. DID DR. HADAWAY ESTIMATE A DCF RESULT EMPLOYING A MULTI-**
 155 **STAGE DCF GROWTH MODEL?**

156 A. Yes. Dr. Hadaway's two-stage growth rate DCF model produces DCF estimates for
 157 ROE of 11.5% - 11.6%.⁸ The problem with this analysis is his primary reliance on the
 158 faulty 6.2% GDP growth measure. When Dr. Hadaway's results are corrected for a
 159 lower GDP growth rate, the results are in the 10.2% range.

160 **Q. PLEASE COMMENT ON DR. HADAWAY'S RISK PREMIUM ANALYSES.**

161 A. Dr. Hadaway presents three risk premium results at page 9 of his Second Supplemental
 162 Testimony as follows:

163 **TABLE 2**

164 **DR. HADAWAY RISK PREMIUM MODEL RESULTS**

165

Model	Interest Rate	Risk Premium	ROE
Forecasted Interest Rate and Risk Premium	7.99%	3.67%	11.66%
October Interest Rate and Risk Premium	6.47%	4.30%	10.77%
New Debt Interest Rate and Risk Premium	6.47%	3.7% - 5.5%	10.17%-11.97%

166

167 As to methods 1 and 2, Dr. Hadaway employs two estimates for single A debt. First, his
 168 7.99% estimate is based on a three month average credit spread (March 09 – May 09) of

⁸ Exhibit RMP_ (SCH-4) p.4.

169 2.59%,⁹ which is added to the 5.4% 30 year Treasury Bond forecast.¹⁰

170 For his second model, Dr. Hadaway's interest rate (single-A corporate debt) of 6.47% is
171 the actual average March – May 2009 cost rate as shown in his Exhibit RMP__ (SCH-2)
172 page 2.

173 The problem with these analyses is the overstatement of the single-A debt cost.

174 I will demonstrate in a subsequent section that the single-A debt cost is in the 5.8%
175 range. If a more reasonable cost of single-A debt were used, such as the 5.8% estimate
176 explained later, Dr. Hadaway's risk premium results would support an equity return of
177 10%.

178 **Q. PLEASE SUMMARIZE YOUR COMMENTS REGARDING DR. HADAWAY'S**
179 **EQUITY RETURN PROPOSALS.**

180 A. Dr. Hadaway's analyses overstate the cost of equity and should not be accepted by this
181 Commission to set rates in this case. In my opinion, when Dr. Hadaway's analyses are
182 adjusted to reflect more realistic and normalized estimates – the results indicate a 10%
183 return on equity is appropriate.

184
185 **SECTION III: REGULATORY ISSUES AND COST OF CAPITAL**

186
187 **Q. PLEASE EXPLAIN THE COST OF CAPITAL CONCEPT AS IT RELATES TO**
188 **THE REGULATORY PROCESS.**

189 A. The overall rate of return to be earned on rate base investment is an essential element in
190 the regulatory and rate setting process. The overall return to be earned on rate base
191 investment is typically a major part of overall revenue requirements. For example, in
192 this case the Company's requested overall return is 8.54%.¹¹

193 A small change in return requirements, can have a large impact on revenue
194 requirements. For example, a 50 basis point reduction to the equity return to a level of

⁹Exhibit RMP__ (SCH-2) p.2.

¹⁰ *Id.* at 3.

¹¹ Direct Testimony Bruce Williams at 2.

195 10.5% results in about a \$19.3 million reduction to revenue requirements. That is
196 almost one third of the entire \$66 million rate increase in this case.

197 **Q. PLEASE EXPLAIN HOW THE VARIOUS COMPONENTS OF COST OF**
198 **CAPITAL ARE DETERMINED.**

199 A. The overall rate of return in the regulatory process is best explained in two parts. First,
200 return to senior securities, such as debt and preferred stock, which is contractually set at
201 issuance. The reasonableness of the cost of this contractual obligation between the
202 utility and its investors is examined by regulatory agencies as part of the utility's overall
203 cost of service.

204 The second part of a Company's overall return requirement is the appropriate cost rate to
205 assign the equity portion of capital costs. The return to equity should be established at a
206 level that will permit the firm an opportunity to earn a fair rate of return. By fair rate of
207 return, I mean a return to equity holders, which is sufficient to hold and attract capital,
208 sufficient to maintain financial integrity, and a return to equity comparable to other
209 investments of similar risks.

210 Two U.S. Supreme Court decisions are often cited as the legal standards for rate of
211 return determination. The first is Bluefield Water Works and Improvement Company v.
212 Public Service Commission of West Virginia, 262 U.S. 679 (1923). The Bluefield case
213 established the following general standards for a rate of return: The return should be
214 sufficient for maintaining financial integrity and capital attraction and a public utility is
215 entitled to a return equal to that of investments of comparable risks.

216 The second U.S. Supreme Court decision is the Federal Power Commission v. Hope
217 Natural Gas Company, 320 U.S. 591 (1942). In the Hope decision, the Court affirmed
218 its earlier Bluefield standards and found that methods for determining return are not the
219 test of reasonableness rather the result and impact of the result are controlling.

220 The cost of capital is defined as the annual percentage that a utility must receive to
221 maintain its financial integrity, to pay a return to security owners and to insure the
222 continued attraction of capital at a reasonable cost and in an amount adequate to meet
223 future needs. Mathematically, the cost of capital is the composite of the cost of several

224 classes of capital used by the utility – debt, preferred stock, and common stock,
225 weighted on the basis of an appropriate capital structure.

226 The ratemaking process requires the regulator to determine the utility’s cost of capital
227 for debt, preferred stock and equity costs. These calculations of cost rates, when
228 combined with the proportions of each type of capital in the capital structure, result in a
229 percentage figure that is then multiplied by the value of assets (investment) used and
230 useful in the production of the utility service to ultimately arrive at a rate charged to
231 customers. Rates should not be excessive (exceed actual costs) or burdensome to the
232 customer and at the same time should be just and reasonable to the utility.

233 In summary, the objective of overall rate of return determination in the regulatory
234 process is to compute the return such that the embedded (contractually required) cost of
235 senior securities is recovered. In addition, a regulated utility should be provided an
236 opportunity to generate additional earnings that are sufficient to compensate equity
237 investors at a level that will hold existing investors, attract new investors, and maintain
238 the financial integrity of the utility.

239 **Q. PLEASE EXPLAIN THE COST OF EQUITY CONCEPT.**

240 A. The cost of equity, or return on equity capital, is the return expected by investors over
241 some prospective time period. The cost of equity one seeks to estimate in this
242 proceeding is the return investors expect prospectively when the rates from this case will
243 be in effect.

244 The cost of common equity is not set by contract, and there are no hard and fast
245 mathematical formulae with which to measure investor expectations with regard to
246 equity requirements and perceptions of risk. As a result, any valid cost of equity
247 recommendation must reflect investors' expectations of the risks facing a utility.

248 **Q. WHAT PRINCIPAL METHODOLOGY DO YOU EMPLOY IN YOUR COST OF**
249 **EQUITY CAPITAL ANALYSES?**

250 A. I employ the Discounted Cash Flow (“DCF”) methodology for estimating the cost of
251 equity, keeping in mind the general premise that any utility's cost of equity capital is the

252 risk free return plus the premium required by investors for accepting the risk of investing
253 in an equity instrument. It is my opinion that the best analytical technique for measuring
254 a utility's cost of common equity is the DCF methodology. Other return on equity
255 modeling techniques such as the Capital Asset Pricing Model ("CAPM") or risk
256 premium are often used to check the reasonableness of the DCF results.

257 **Q. PLEASE DESCRIBE THE RISKS YOU REFER TO ABOVE.**

258 A. As I stated earlier in this testimony, equity investors require compensation above and
259 beyond the risk free return because of the increased risk factors investors face in the
260 equity markets. Thus, investors require the risk free return plus some risk premium
261 above the risk free return. The basic risks faced by investors that make up the equity
262 risk premium include business risks, financial risks, regulatory risks, and liquidity risks.

263 **SECTION IV: CURRENT CAPITAL MARKET CONDITIONS**

264 **Q. DO CURRENT ECONOMIC CONDITIONS WARRANT HIGHER RETURNS**
265 **FOR UTILITY COMPANIES?**

266 A. In my opinion, no. While the markets have been struggling since September 2008,
267 government intervention has had an impact. I discuss this issue in the following pages.
268 The end result is that cost of capital today is not higher as a result of the economic
269 turmoil that impacted the global markets.

270 **Q. ARE CURRENT ECONOMIC CONDITIONS CONTINUING TO DECLINE IN**
271 **2009?**

272 A. The impacts of the global recession continue through 2009. The U.S. and global
273 financial markets continue to struggle with liquidity issues following the collapse of the
274 subprime mortgage markets. The Federal Reserve and central banks around the world
275 have been ramping up lending in an all out effort to keep the financial markets
276 functioning.

277 The Federal Reserve Chairman, Ben Bernanke, predicted that the global financial
278 markets crisis will restrain U. S. economic growth through 2009. That prediction
279 continues to be accurate. Thus, while inflation issues have receded, economic

280 conditions have limited prospects of economic growth. The Federal Reserve has taken
281 numerous steps to address financial market liquidity issues including the cut in the
282 federal funds rate to a target range of 0% to 0.25% as of December 16, 2008. These
283 rates were recently reaffirmed by the Federal Reserve. I have included in my Exhibit
284 OCS 1.2, monthly bond yields for various securities showing changes by month since
285 January 2006 through August 2009.

286 **Q. DO YOU HAVE ANY GENERAL OBSERVATIONS CONCERNING THE**
287 **RECENT TRENDS IN ECONOMIC CONDITIONS AND THE IMPACT ON**
288 **CAPITAL COSTS?**

289 A. Yes. As a general matter the U.S. economy has enjoyed growth, prosperity and stability
290 since the early 1990's. Over this time period there has been a general level of economic
291 expansions accompanied by historical low levels of inflation and interest rates.

292 Now, the economy has slowed significantly at least initially as a result of the "sub-
293 prime" mortgage problems and more recently as a result of the liquidity crisis in the
294 financial markets. Moreover, the economic slow down is having global impacts as can
295 be seen in declining energy prices (natural gas, oil) as well as general commodity prices.
296 The financial sector crisis intensified through the last quarter of 2008, following the
297 collapse and/or bailout of such institutions as Bear Stearns, Lehman Brothers, Merrill
298 Lynch, Freddie Mac, Fannie Mae, AIG and Citigroup, Inc. The U.S. Government and
299 governments around the world have been and continue to employ unprecedented
300 monetary actions to minimize the impacts of the financial crisis on economic growth.
301 While the impacts of these government rescue efforts and other monetary policy actions
302 have not yet resolved all the tight credit market problems – that does not mean there has
303 been no impact or continued impact.

304
305 The one sure thing is that an economic slowdown has occurred and is expected to
306 continue. For this reason economic growth will be lower than past forecast estimates
307 have suggested. This is true across all economic sectors including the utility industry.
308 Thus, while utility stock prices may be lower and dividend yields higher – the other side
309 of the coin shows lower economic growth expectations by investors.

310 **Q. PLEASE DISCUSS THE FINANCIAL MARKETS, THE ECONOMY AND THE**
311 **GENERAL RESPONSE OF THE U.S. GOVERNMENT.**

312 A. There is no question that the mortgage market collapse, subprime mortgage crisis,
313 credit/liquidity crisis, economic recession and the subsequent bailout and restructuring
314 of financial institutions has not only had tremendous impacts on the U.S. national
315 economy, but global economic implications as well. After initial problems developed in
316 the mortgage market, these problems associated with the subprime developed into a
317 crisis which led to the collapse and need for bailout of certain financial institutions. The
318 turmoil in the U.S. markets peaked in the third-quarter of 2008. During the summer of
319 2008 commodity prices increased sharply with a barrel of oil increasing to over \$150
320 and natural gas exceeding \$12 mmbtu.

321 The U.S. economy entered the current recession in late 2007 and unemployment figures
322 have been increasing. As of August 2009, the unemployment rate is at about 9.5% and
323 10% or more unemployment rate is forecast by many analysts. Commodity prices have
324 declined, but have rebounded from first quarter 2009 lows. The stock market for 2009
325 hit a low in March, but has since rebounded from March 2009 levels. The change in
326 course regarding commodity prices and the market downturn from early 2009 levels is
327 some evidence that the downward economic slide is over. While unemployment figures
328 lag other economic indicators.

329
330 In response to the economic crisis, the Federal Reserve has taken extraordinary and
331 substantial measures to stabilize financial markets and address the significant resulting
332 liquidity crisis. Among the numerous Federal Reserve measures is the opening of
333 lending facilities to numerous banking and investment firms to free up tight credit
334 markets. The development of the Troubled Asset Relief Program (“TARP”) is designed
335 to provide over \$700 billion in government funds into the banking system through
336 capital infusions. In addition, the federal government has added billions of additional
337 dollars to bail out and stabilize such prominent financial institutions as AIG, Citigroup
338 and Bank of America. The federal government has expended substantial sums to bailout
339 other industries such as the auto industry with cash for General Motors and Chrysler.
340 As part of the overall budget process, we have seen the federal government provide

341 almost \$800 billion of economic stimulus – including tax cuts and additional
342 government spending aimed at creating jobs and addressing the overall economic
343 slowdown.

344 **Q. HOW HAVE THE FINANCIAL MARKETS RESPONDED TO THE ACTIONS**
345 **OF THE FEDERAL RESERVE AND OTHER STIMULUS ACTIONS?**

346 A. The long-term credit market response has been significant over the first two quarters of
347 2009. The credit/liquidity crisis is associated with concerns and reluctance by credit
348 providers to provide needed capital due to concerns over the weak economy. As shown
349 in Exhibit OCS 1.2, interest rates on BBB corporate rated bonds increased substantially,
350 about 7.0% in June 2008 to over 9.0% in November 2008. Since the November 2008
351 peak in the midst of the liquidity crisis, BBB corporate rated bonds have steadily
352 declined. Now, for August 2009, BBB corporate rated bonds have averaged about
353 6.58%¹² or are at levels seen just prior to the liquidity crisis. Current BBB corporate
354 bond yields in early September are between 6.3% and 6.5% as of September 9, 2009,
355 and have continued at or around the 6.5% level into September.

356 Further, yields on Treasury Bonds, for 30 year, 20 year and 10 year are at levels in
357 August 2009 that the market experienced in May and June 2008 – just prior to the
358 economic credit squeeze. Also, like BBB corporate bonds, the AAA corporate bond
359 yields are back to the pre-credit/liquidity crisis levels. These historical bond yields are
360 shown in Exhibit OCS 1.2.

361
362 In summary, the market evidence appears to demonstrate that the massive government
363 response has had the desired effect on credit markets. Actions by the Federal Reserve
364 and the current administration show a continued commitment to restoring the economic
365 health quickly. But, while the worst of the credit crisis may be over, the U.S. economy
366 has continued to contract, albeit at a slower rate of decline. Economic recovery is
367 expected to gain momentum slowly with some economic segments growing more slowly
368 than others.

369

¹² www.federalreserve.gov/releaseh15date/weekly

370 Thus, while the economy is slowly changing course in terms of economic growth, the
371 upheaval in financial markets is an event of the past as we see interest rates and capital
372 costs moving to pre-financial crisis levels.

373 **Q. WHAT CONCLUSIONS DO YOU DRAW FROM CURRENT ECONOMIC**
374 **CONDITIONS IN PROVIDING GUIDANCE IN SETTING EQUITY CAPITAL**
375 **COSTS IN THIS PROCEEDING?**

376 A. As a general matter capital costs remain low in comparison to historical levels. While
377 the bottom tier of corporate bond rates (BBB) increased since September 2008 – such
378 increases do not appear to be a trend, but rather the direct impact of an atypical event in
379 the capital markets. The economic slowdown or recession will cause general investor
380 expectations of growth to decline. The bottom line is that the general economic data
381 does not support increasing capital costs. Further, it is not sound ratemaking to establish
382 revenue requirements and rates on atypical or abnormal events – especially when such
383 events (continuation of the financial liquidity crisis) are not likely to continue to be
384 repeated.

385 **SECTION V: COST OF EQUITY CAPITAL DCF ANALYSIS**

386

387 **Q. YOU STATED ABOVE THAT YOU RELIED ON A DCF ANALYSIS. PLEASE**
388 **DESCRIBE HOW YOU CONDUCTED YOUR DCF ANALYSIS.**

389 A. For my DCF analyses I employ a comparable risk group of companies because there is
390 no market financial data for RMP. The Company is a division of PacifiCorp which is a
391 wholly owned subsidiary of MidAmerican Energy Holding Company. Thus, without
392 financial data a DCF analysis cannot be computed directly on RMP or for that matter
393 PacifiCorp. The comparable risk group of companies for which there is market data
394 available serves as a proxy for RMP.

395 I applied the DCF method employing market data, as well as forecasted data of various
396 financial parameters to a comparable group of nineteen electric utility companies. The
397 comparable group of nineteen utility companies employed in my analysis comes from
398 the same group of companies used by RMP's witness Dr. Hadaway in this case. Given

399 that I am basing my analysis on the same group of comparable companies as employed
400 by Dr. Hadaway, the equity cost calculation issue is narrowed to the methodology of
401 estimation. I discuss in detail in Section II the problems I have with Dr. Hadaway's
402 specific cost of equity analyses.

403 **Q. WHY HAVE YOU EXAMINED COMPARABLE ELECTRIC COMPANIES?**

404 A. There are several reasons why the estimate of a cost of capital requires an analysis of a
405 group of comparable risk companies rather than the single firm subject of the analysis:

406 (1) A comparable risk group analysis is consistent with the requirements of a fair
407 and reasonable return addressed in the *Hope* and *Bluefield* cases. The return on
408 investment should be commensurate with returns earned by firms with
409 comparable risk. Thus, there is a need to examine firms of comparable risk to
410 identify the fair and reasonable comparable returns being earned. In addition, the
411 equity returns of comparable firms are viewed as opportunity costs of forgone
412 investments in the market which, like other investment opportunities, will
413 directly impact the cost of equity of the Company.

414 (2) The reliability of the cost of equity estimate is enhanced when the calculation is
415 based on equity capital estimates from a variety of risk equivalent companies. A
416 group of comparable companies can be employed as a check on a single
417 company analysis. Further, the comparable group analysis, whether employed as
418 a check or the primary analysis, mitigates any distortions resulting from
419 measurement errors in dividend yield and expected growth measures and
420 estimates. For example, the average growth rate estimate based on forecasts of
421 several comparable firms is less likely to deviate from investor expectations of
422 growth than an estimate for a single firm. Moreover, the general assumptions
423 underlying the DCF model are more likely to be met for a group of companies
424 than for a single firm.

425 (3) An analysis of a comparable group also avoids circularity problems. In the
426 analysis of investor-owned utilities, the stock price (that is, the cost of capital) is
427 a direct function of an investor's growth rate expectations, which is also a
428 function of an investor's perception of the regulatory environment. The bottom
429 line is that the cost of equity depends in part on the anticipated regulatory

430 environment and actions. Thus, both the components of the DCF model –
431 dividend yield and growth expectations – are influenced by the regulatory
432 process.

433 (4) Extending the sample size of comparable companies beyond a single regulatory
434 influence will mitigate the regulatory circulatory problem. Specific conditions
435 concerning a subject utility often requires that a comparable company analysis be
436 employed. One of the most common conditions is the lack of market data
437 necessary to perform a DCF analysis. In times of utility consolidation and
438 merger, many electric utilities are owned and controlled by a single parent
439 holding company, which is the case with RMP.

440 **Q. HAVE YOU PROVIDED A LISTING OF THE COMPANIES IN THE**
441 **COMPARABLE GROUP?**

442 A. Yes. Contained in my Exhibit OCS 1.3 is a list of the nineteen companies in the
443 comparable group along with additional data of company Beta and projected equity ratio
444 for 2009, 2010 and 2014.

445 **Q. PLEASE EXPLAIN THE DCF METHODOLOGY YOU HAVE EMPLOYED IN**
446 **YOUR ANALYSIS.**

447 A. The foundation of the DCF model is in the theory of security valuation. The price that
448 an investor is willing to pay for a share of common stock today is determined by what
449 income stream the investor expects to receive from the investment. The return the
450 investor expects to receive over the investment time horizon is composed of: (i)
451 dividend payments, and (ii) the appreciated sale value of the investment. A proper
452 analysis adds dividends to the gain on the final sale value, and discounts these expected
453 future earnings to a present value.

454 To determine or estimate investor requirements using the DCF model, one computes a
455 cost of capital requirement, or discount rate from the current market data and the
456 expected dividend stream. The DCF model stated as a formula is as follows:

$$457 \quad K = D/P + G$$

458 where:

459 K = required return on equity,
460 D = dividend rate,
461 P = stock price,
462 D/P = dividend yield, and
463 G = growth in dividends.

464 **Q. PLEASE EXPLAIN HOW YOU CALCULATED THE DIVIDEND YIELD FOR**
465 **THE COMPARABLE COMPANIES.**

466 A. The dividend yield is the ratio of the dividend rate to the stock price. When calculating
467 the dividend yield, one must be cautious and not rely on spot stock prices. One must be
468 equally cautious not to rely on long periods of time as the data becomes unrepresentative
469 of market conditions. The objective is to use a period of time such that the resulting
470 dividend yield is representative of the prospective period when rates will be in effect.

471 While there is no fixed period for selecting the denominator of the dividend yield (i.e.,
472 stock price), the key guideline is that the yield not be distorted due to fluctuations in
473 stock market prices. On the other hand, dividends, the numerator of the yield
474 calculation, are relatively stable, as opposed to the stock prices, which are subject to
475 daily and cyclical market fluctuations. The selection of a representative time period will
476 dampen the effect of stock market changes.

477 The price and dividend data used for each of the companies in the comparable group is
478 contained in my Exhibit OCS 1.4.

479 As I discussed earlier there has been substantial volatility in the market during the first
480 part of October 2008 through March 2009 due to impacts associated with the current
481 financial market crisis. For these reasons I have examined stock prices for 6 week, 8
482 week, 12 week, 52 week, and spot intervals to calculate a representative price for the
483 dividend yield calculation.

484 To calculate dividends, I employed the current annualized dividend increased for $\frac{1}{2}$ the
485 growth rate. The resulting dividend yield is shown on my Exhibit OCS 1.4 for the
486 comparable group.

487 **Q. HOW DOES YOUR DIVIDEND YIELD CALCULATION COMPARE TO DR.**
488 **HADAWAY'S ESTIMATES?**

489 A. As shown on my Exhibit OCS 1.4 the comparable group average dividend yield is
490 between 4.95% and 5.1%. Dr. Hadaway's analysis shown in his Exhibit RMP (SCH-4)
491 shows a dividend yield range for the comparable group of 5.52% to 5.57%.

492 **Q. PLEASE EXPLAIN HOW YOU HAVE CALCULATED THE EXPECTED**
493 **GROWTH RATE IN YOUR DCF ANALYSIS FOR THE COMPANIES IN THE**
494 **COMPARABLE GROUP.**

495 A. Like dividend yields, there exists no single or simple method to calculate growth rates.
496 The calculation of investor growth expectations is the most difficult part of the DCF
497 analysis. To estimate investor expectations of growth, I have examined historical
498 growth and forecasted growth rates, and other financial data for each of the companies in
499 the comparable group.

500 Implementation of the DCF model requires the exercise of considerable judgment with
501 regards to estimating investor expectations of growth and it is a difficult task, but such
502 difficulties are not insurmountable. Many factors affect capital markets in general and
503 individual stocks specifically, investors are aware and informed of current economic
504 conditions and expectations. Such economic variables entail the current state of the
505 economy, the trade deficit, federal budget uncertainty, fiscal policy, inflation and
506 Federal Reserve Board policies on interest rates.

507 Investors generally have good information on the economic and financial variables
508 outlined above. All of this information is available quickly, especially in recent decades
509 with easy access to the worldwide web. This information influences return expectations
510 and, as a result, the maximum price an investor will pay for various securities.

511 Like the information available on the general economy, investors also have access to a
512 wealth of information about particular types of securities, industries and specific
513 company investments. This information is also factored into investor expectations and
514 therefore the stock price individuals are willing to pay.

515 Common earnings growth rate forecasts and historical growth rate data may be found in
516 the Value Line Investment survey (“Value Line”) publication. These Value Line
517 earnings estimates are five year projections in annual earnings. Again, Value Line is
518 widely available to the public, and is a good source of earnings projections. Other
519 earnings estimates are forecasted by Zacks as well as First Call projections, widely
520 available on the internet at Zacks.com and Yahoo Finance respectively. Those earnings
521 projections along with other stock specific financial data provide a range of estimates of
522 earnings and are readily available at no cost.

523 Another growth estimate is referred to as the sustainable growth or retention ratio
524 growth estimate. To project future growth in earnings under the sustainable growth
525 method, one multiplies the fraction of a firm’s earnings expected to be retained (not paid
526 out as dividends) by the expected return on book equity. As a formula:

$$527 \quad (\text{growth} = b \times r)$$

528 Where:

$$529 \quad b = 1 - (\text{dividends per share} / \text{earnings per share})$$

$$530 \quad r = \text{earnings per share} / \text{net book value share}$$

531 All the data necessary to calculate the elements of the sustainable growth method are
532 available on a forecasted basis in Value Line.

533 **Q. PLEASE EXPLAIN YOUR GROWTH RATE ANALYSIS.**

534 A. I have included in my Exhibit OCS 1.5 the growth rates I have reviewed in my analysis.
535 The first set of growth rates examined is the five year and ten year historical growth
536 rates in earnings per share, dividends per share, and book value per share as reported by
537 Value Line. The second set of growth rates is the Value Line forecasted growth rates in
538 earnings per share, dividends per share, and book value per share for each company in
539 the comparable group. The third set of growth rates examined is the Zacks forecasted
540 growth rates in earnings. The fourth growth estimate considered is the First Call growth
541 rates which are readily available to investors at Yahoo Finance.

542 In addition, I have examined the growth rates based on the forecasted retention ratio
543 growth estimate discussed above. These calculations are included in my Exhibit OCS
544 1.5.

545 The growth rates described above provide a range of estimates for each of the
546 comparable companies. The resulting range of average growth rates for the group is
547 from 4.75% to 5.92% when looking at internal growth forecasts and earnings per share
548 (“EPS”) forecast estimates for the comparable group. Relying on the combined
549 forecasted earnings per share estimates and internal growth rate estimates, the growth
550 rate average range can be narrowed to 5.66% to 5.79% as shown in Exhibit OCS 1.5.

551 **Q. HOW DO THESE GROWTH RATES COMPARE TO GROWTH ESTIMATES**
552 **EMPLOYED BY DR. HADAWAY?**

553 A. Reviewing Dr. Hadaway’s Exhibit RMP (SCH-4) page 2 of 5, it appears Dr. Hadaway
554 has relied upon a 6.02% growth average for the comparable group. Recent estimates for
555 Value Line, Zacks and Yahoo Finance indicate Dr. Hadaway’s estimates are both
556 outdated and overstated. The end result is Dr. Hadaway’s estimates should not be relied
557 on in this case.

558 **Q. PLEASE SUMMARIZE YOUR CONSTANT GROWTH DCF ANALYSIS.**

559 A. I have summarized these results in my Exhibit OCS 1.6. For the comparable group
560 based on an average yield and a growth rate, the ROE estimate based on the comparable
561 group is 10.4% to 10.6%. Employing the midpoint of the range for these estimates
562 results in an ROE estimate of 10.5%.

563 **Q. HAVE YOU CALCULATED ADDITIONAL DCF ANALYSES FOR THE**
564 **COMPARABLE GROUP COMPANIES?**

565 A. Yes. I have calculated a two stage non-constant growth DCF analysis for the
566 comparable group companies.

567 **Q. PLEASE DESCRIBE YOUR TWO-STAGE NON-CONSTANT GROWTH DCF.**

568 This analysis calculates equity cost using a non-constant growth Two Stage DCF Model.
569 The constant growth DCF model is often adjusted to reflect multiple growth

570 assumptions because the constant growth rate assumption is often not consistent with
571 investor expectations. As an example, it is often the case where short-term growth
572 estimates are not consistent with long-term sustainable growth projections. In those
573 instances, where more than one growth rate estimate is appropriate, a multi-stage non-
574 constant growth model can be employed to derive a cost of capital estimate. In other
575 words, the constant growth model is adjusted to incorporate multiple growth rate
576 periods, assuring a constant growth (long-term) rate is estimated for a longer period.

577 For the first growth stage (years 1-4) of the model, the Value Line growth in dividends
578 is employed and an annual dividend is calculated. The second stage (years 5 and
579 beyond)¹³ an earnings growth estimate based on the comparable group average of 5.3%
580 is employed. The 5.3% growth estimate is the average of the EPS estimates and internal
581 growth estimates. This long-run earnings estimate is based on the average of the
582 endpoint estimates for Value Line, Zacks, and First Call earnings forecasts along with
583 the internal growth estimate.

584 In the two-stage model the dividend cash flows are discounted equal to the price¹⁴ paid
585 for the stock. The calculated discount rate or internal rate of return is the cost of equity
586 capital estimate.

587 **Q. WHAT ARE THE RESULTS OF THE TWO-STAGE NON-CONSTANT**
588 **GROWTH DCF ANALYSIS?**

589 A. The results of the two-stage non-constant growth DCF analysis are shown in Exhibit
590 OCS 1.7. The comparable group average indicates a cost of equity of 10.2% and
591 10.25%.

592 **Q. PLEASE SUMMARIZE YOUR DCF ESTIMATES.**

593 A. The table below is a summary of the DCF results:

¹³ The model is ended at year 150.

¹⁴ Price is based on the 6 week average discussed earlier.

TABLE 3
SUMMARY OF COMPARABLE GROUP DCF ANALYSES

Description	COMPARABLE GROUP	MIDPOINT
Constant Growth DCF	10.4-10.6	10.5
Non-Constant Growth Two Stage DCF	10.2-10.25	10.25

594 This range of estimates of 10.2% to 10.6% indicates a cost of equity of about 10.4% for
595 the group.

596

597 **SECTION VI: RISK PREMIUM/CAPM COST OF EQUITY ESTIMATE**

598 **Q. PLEASE DESCRIBE THE RISK PREMIUM ANALYSIS.**

599 A. Debt instruments such as bonds (long-term debt) are less risky than common equity
600 when both classes of capital are issued by the same entity. Bondholders have a prior
601 contractual claim to the earnings of the corporation and returns on bonds are less
602 variable and more predictable than stocks. The bottom line is that debt is less risky than
603 equity. There are numerous return studies of capital market investments, all of which
604 show lower returns with lower risks and higher returns with higher risk investments.
605 These financial truisms provide a sound theoretical basis and foundation for the risk
606 premium method for estimating equity costs. The risk premium approach is useful in
607 that the analysis is based on current market interest rates, that is, the current observable
608 cost of debt capital. But, the risk premium approach is not without its problems and
609 drawbacks. In practice, there is considerable debate as to the time period to analyze in
610 the determination of the bond/equity return risk spread. Historical debt/equity risk
611 spreads measured over many decades may not be relevant to current capital market
612 requirements. Others argue that a long-term analysis is necessary, since the goal is to
613 measure investors' long-term expectations.

614 Another version of the risk premium method is the capital asset pricing model
615 ("CAPM"). Generally, the CAPM begins with a theoretically risk-free interest rate such
616 as a three-month Treasury bill rate. The risk premium, or equity spread above and

617 beyond the risk free rate is adjusted by the stock beta.¹⁵ The risk free return measure is
618 combined with the equity risk premium adjusted for the measure of beta to arrive at a
619 CAPM result.

620 Like the risk premium discussed above, the CAPM is subject to measurement
621 uncertainties. First, the general problem of how to measure the equity risk premium and
622 the time period for which the premium is analyzed is subject to considerable debate.
623 This problem and associated criticisms is generic to all variants of the risk premium
624 model. Second, measures of beta are often unstable from period to period and may not
625 reflect the equity risk spread measure.

626 For all of the above reasons, risk premium methods should be viewed with considerable
627 caution. The risk premium analysis and CAPM described below consists of analyses of
628 shorter time horizons and are employed as a check on the DCF results described earlier.

629 **Q. HOW DID YOU CALCULATE YOUR RISK PREMIUM ANALYSIS?**

630 A. For the calculation of risk premium I employed the basic analysis presented in Dr.
631 Hadaway's Direct Testimony at Exhibit RMP__(SCH-5) page 1 of 2. This analysis is
632 updated and corrected for a more reasoned estimate of expected single-A bond yield. I
633 outline the calculations in my Exhibit OCS 1.8. Employing a single-A debt rate of
634 5.82% and a 4.57% risk premium, results in a risk premium estimate of 10.39%.

635 **Q. DID YOU CALCULATE AN ALTERNATIVE RISK PREMIUM?**

636 A. Yes. An alternative analysis entailed calculating a risk premium based on the difference
637 between returns on stocks (9.6%) and the returns on long-term corporate bonds (5.90%)
638 for the period covering 1926 – 2008 as reported in the 2009 Stocks, Bonds and Inflation
639 Classic Yearbook published by Morningstar, Inc. The resulting risk premium is 3.70%
640 (9.6% - 5.9%=3.7%) employing the geometric mean average returns. Combining a
641 3.70% risk premium and a 5.82% single-A debt rate results in a 9.52% ROE based on a
642 risk premium approach.

¹⁵ Beta is a measure of the volatility of the specific stock movement relative to that of a market measure such as the S&P 500. A beta below 1.0 means that a specific stock is less volatile than the market measure, while a beta above 1.0 indicates a specific stock is more volatile than the market measure.

643 Employing the arithmetic returns the risk premium results are about 11.32% as shown in
644 my Exhibit OCS 1.8.

645 **Q. HOW DID YOU ARRIVE AT AN ESTIMATE OF THE SINGLE-A DEBT**
646 **RATE?**

647 A. To arrive at the single-A debt rate I combined a 139 basis point spread for single-A debt
648 to the 30-year U.S. Treasury rate. To estimate the single-A utility spread of 139 basis
649 points, I employed the average spread for the January 2007 through May 2008 period.
650 This period is just prior to the liquidity crisis and represents a sufficient period without
651 abnormal market conditions. I then combined this 139 basis point spread with the
652 current three month average 30-year U.S. Treasury average of 4.43% to arrive at a
653 5.82% estimate for single-A bonds.

654 **CAPITAL ASSET PRICING MODEL ANALYSIS**

655 **Q. PLEASE DESCRIBE THE CAPITAL ASSET PRICING MODEL.**

656 A. The Capital Asset Pricing Model (“CAPM”) is a version of the risk premium approach
657 described above. The CAPM measures the relationship between a specific security’s
658 investment risk and its return. The general mathematical form of the CAPM can be
659 described as follows:

660
$$K=RF+B(RM-RF)$$

661 Where: K = cost of equity

662 Rf=risk free return

663 Rm=return on market

664 B=Beta

665 Rm-Rf= market risk premium

666 **Q. HOW HAVE YOU CALCULATED YOUR CAPM ESTIMATES?**

667 A. I have applied the CAPM to each company in the comparable risk group as is shown in
668 my Exhibit OCS 1.9. For the risk free rate, I have employed a three month average yield
669 (June 2009 – August 2009) for 30 year U.S. Treasury bonds which is shown in my

670 Exhibit OCS 1.2. Over the 3 month period 30 year Treasury bonds had an average yield
671 of 4.43%.

672 The market risk premium component ($R_m - R_f$) represents the investor expected risk
673 premium over the risk free return. For this calculation I have relied on the 2009
674 Morningstar yearbook which provides long-term (1926-2008) market and government
675 bond returns. The market return over this time horizon is 9.6%¹⁶ while the long-term
676 government bond return is 5.7%¹⁷ resulting in a risk premium of 3.9% based on the
677 geometric average return calculation. I also ran the calculation employing arithmetic
678 average returns which show a market return (1926 – 2008 of 11.7%¹⁸ and a long-term
679 government bond return of 6.1%¹⁹ resulting in a risk premium of 5.6%.

680 **Q. PLEASE DESCRIBE THE BETA YOU EMPLOYED IN YOUR CAPM**
681 **ANALYSIS.**

682 A. Beta is a measure of specific stock volatility relative to a market index. Betas less than
683 1.0 move less than the market while Betas greater than 1.0 have more movement or
684 volatility relative to a market index. For this case I employed the Value Line Betas for
685 each company in the comparable group. These Value Line Betas are shown in my
686 Exhibit OCS 1.3.

687 **Q. WHAT ARE THE RESULTS OF YOUR CAPM ROE ESTIMATES?**

688 A. My analysis for CAPM is contained in my Exhibit OCS 1.9. The CAPM result is in the
689 7.1% range using the geometric average and 8.07% employing the arithmetic average
690 risk premium. Given current debt costs, I believe the CAPM results are low and not
691 reasonable estimates of equity costs, given current BBB bond rates of 6.6%.

692 **Q. DID YOU ESTIMATE AN ALTERNATIVE CAPM CALCULATION OF**
693 **EQUITY RETURN?**

694 A. Yes, I calculated an alternative estimate employing an empirical version of the CAPM or

¹⁶ Morningstar at 31

¹⁷ *Id.*

¹⁸ *Id.*

¹⁹ *Id.*

695 ECAPM. It is argued that the CAPM estimate of equity cost will underestimate the
696 return required for low-beta securities and overstate the required return for high-beta
697 securities.

698 To address the flaws of the CAPM, the alternative ECAPM estimates the cost of equity
699 employing the following equation:

$$700 \quad \text{ROE} = R_f + \alpha + (\beta \alpha (R_m - R_f))$$

701 Where (α) is the measure of the constant of a risk return line. Typically, an (α) value of
702 1% to 2% is employed in the ECAPM analysis resulting in a more conservative estimate
703 of equity return. Employing a 1% (α) value results in the following ECAPM:

$$704 \quad \text{ROE} = R_f + .25 (R_m - R_f) + .75 \beta (R_m - R_f)$$

705 I have made these calculations in my Exhibit OCS 1.9.

706 **Q. WHAT ARE THE RESULTS OF YOUR ECAPM ANALYSES?**

707 A. The ECAPM estimates employing the geometric average and arithmetic average risk
708 premium estimates are 7.3% and 8.6% respectively. Given current BBB bond rates are
709 in the 6.6% range, only the higher end of these estimates of 8.6% should be considered
710 as reasonable estimates of current equity costs.

711 **Q. PLEASE SUMMARIZE YOUR DCF, RISK PREMIUM AND CAPM**
712 **ANALYSES?**

713 A. The following table summarized the cost of equity results for each analysis:

714

715
716
717

TABLE 4
COST OF EQUITY CAPITAL SUMMARY

<u>Model</u>	<u>Range</u>	<u>Midpoint</u>
Constant Growth DCF	10.43% - 10.62%	10.53%
Two-Stage DCF	10.20% - 10.25%	10.2%
ECPAM	8.55% - 8.56%	8.6%
Risk Premium	9.52% - 10.39%	9.96%

718 The relevant range of results indicates a cost of equity from 9.5% to 10.5% with 10.0%
719 as a midpoint.

720 **SECTION VII: CAPITAL STRUCTURE**

721 **Q. WHAT CAPITAL STRUCTURE IS THE COMPANY PROPOSING IN THIS**
722 **PROCEEDING?**

723 A. Based on the Direct Testimony of Company witness Bruce Williams, RMP is proposing
724 the following capital structure, cost rates and overall cost of capital to be earned on rate
725 base investment:

726

TABLE 5²⁰
ROCKY MOUNTAIN POWER
OVERALL COST OF CAPITAL

<u>Description</u>	<u>Percent</u>	<u>Cost</u>	<u>Weighted Cost</u>
Long-Term Debt	48.7%	5.98%	2.91%
Preferred Stock	0.3%	5.41%	0.02%
Common Equity	<u>51.0%</u>	<u>11.00%</u>	<u>5.61%</u>
Total	<u>100.00%</u>	-	<u>8.54%</u>

Thus, the Company requests an overall cost of capital to be earned on rate base investment of 8.54% in this case.

Q. WHAT IS THE SIGNIFICANCE OF CAPITAL STRUCTURE?

A. The overall cost of capital is the sum of the weighted average cost rates of various sources of capital. The quantity or portion of each type of capital, combined with the cost rate of capital determines the overall rate of return that the Company should be allowed to earn in this proceeding. The most significant relationship in any capital structure is the debt to equity ratio.

Q. DOES THERE EXIST SOME SET RELATIONSHIP OR IDEAL MIX OF DEBT AND EQUITY CAPITAL?

A. There exists no set debt/equity relationship for all firms or all industries in terms of leveraging. However, the ideal capital structure is one that minimizes the overall cost of capital to the firm, while still maintaining financial integrity so as to maintain the ability to attract capital at reasonable costs to meet future needs. Because the cost of debt is generally lower than the cost of equity, and also because the cost of debt represents a tax deductible expense, any increase in the quantity of debt capital tends to decrease the overall cost of capital relative to equity financing. One must keep in mind that increases

²⁰ Direct Testimony Bruce Williams at 2:41.

749 in the quantity of debt financing can cause the financial risk of the Company to increase.
750 In other words, there is a cost for the savings associated with increased debt leveraging.
751 That cost is increased financial risk to the firm.

752 In summary, it is not possible to determine with precision the exact proportion of debt
753 and equity that minimizes the overall cost of capital without imposing undue financial
754 risk upon the Company. There does exist some range of capital structure that generally,
755 meets the goal of minimizing the overall cost of capital while maintaining the firm's
756 financial integrity.

757 **Q. WHAT CRITERIA SHOULD REGULATORS EMPLOY IN DETERMINING**
758 **THE APPROPRIATE CAPITAL STRUCTURE TO BE USED FOR**
759 **RATEMAKING?**

760 A. In my opinion, rate regulation should focus on two criteria to determine the appropriate
761 capital structure. Those factors as outlined below should be economy and safety.

762 The advantage of debt in the capital structure is that debt costs less than equity.
763 Moreover, interest charges are deductible for income tax purposes and act to reduce
764 taxes. Thus, the more debt in the capital structure the lower the cost of capital will be.
765 The question of economy is addressed by examining whether increases in the debt ratio
766 act to increase the cost rates of both debt and equity so as to over balance the benefits of
767 the larger proportion of debt.

768 In addition, there is always the overriding question of safety. In other words, financial
769 risk is increased if the proportion of debt is increased by such a magnitude that interest
770 obligations cannot be covered during periods of depressed earnings.

771 **Q. HOW DOES THE COMPANY'S PROPOSED CAPITAL STRUCTURE WHICH**
772 **INCLUDES A 51.0% EQUITY RATIO COMPARE WITH THE CAPITAL**
773 **STRUCTURE RATIOS OF THE COMPARABLE RISK COMPANIES?**

774 A. The Company's proposed capital structure compares quite favorably to the equity ratios
775 in the comparable risk group. As can be seen from Exhibit OCS 1.3 the comparable
776 group equity ratio averages 48.4% for 2010, while RMP has an equity ratio of 51.0% for

777 the test year ending June 2010. Thus, RMP has less financial risk than the comparable
778 group companies.

779 **Q. DO YOU HAVE ANY COMMENTS ON THE COMPANY'S PROPOSED**
780 **CAPITAL STRUCTURE?**

781

782 A. Yes. It must also be remembered that the Company is being afforded the opportunity to
783 employ a forecasted test period and capital structure. While the Commission has
784 determined the forecast test period is the 12 months ending June 30, 2010, the test year
785 is forward looking. A forecasted test year provides the Company benefits by reducing
786 risks associated with regulatory lag. In other words, future investment and cost changes
787 that are reasonably expected to occur in the rate effective period are reflected in the
788 Company's revenue requirement and capital structure.

789 **Q. WHAT CAPITAL STRUCTURE AND COST RATES ARE YOU**
790 **RECOMMENDING THAT THE COMMISSION ADOPT IN THIS CASE?**

791 A. I am recommending that the Commission approve the Company's proposed
792 capitalization levels for the test period ending June 30, 2010, but I also recommend that
793 the common equity cost rate be reduced to the 10.0% level I recommended earlier in this
794 testimony.

795 Based on the analyses and results discussed above, I am recommending the following
796 capital structure, cost rates and overall cost of capital for this case:

797

798
799
800
801
802
803

TABLE 6²¹
RECOMMENDED OVERALL COST OF CAPITAL
FOR ROCKY MOUNTAIN POWER
TEST YEAR ENDING JUNE 30, 2010

<u>Description</u>	<u>Ratio</u>	<u>Cost</u>	<u>Weighted Cost</u>
Long-term Debt	48.7%	5.98%	2.91%
Preferred Stock	0.3%	5.41%	0.02%
Common Equity	<u>51.0%</u>	<u>10.00%</u>	<u>5.10%</u>
Total	<u>100.0%</u>	—	<u>8.03%</u>

804

805 As can be seen from the above table when the long-term debt cost rates and common
806 equity cost rates reflect current market conditions, the Company's overall cost of capital
807 is 8.03%.

808 **SECTION VIII: FINANCIAL INTEGRITY**

809 **Q. WILL YOUR RECOMMENDED RETURN PROVIDE THE COMPANY**
810 **SUFFICIENT CASH FLOW AND FINANCIAL METRICS TO MAINTAIN ITS**
811 **FINANCIAL INTEGRITY?**

812 A. Yes. Based on the capital structure above, my recommended overall cost of capital
813 (which is based on a 10.0% ROE) provides sufficient financial metrics for the Company.

814 **Q. WHAT FINANCIAL RATIOS OR FINANCIAL METRICS SHOULD THE**
815 **COMMISSION CONSIDER WHEN EVALUATING COST OF EQUITY?**

816 A. In my opinion, the Commission should consider the financial metrics that bond rating

²¹ It should be noted that I have included a 10% equity return without considering that RMP's ECAM proposal will be adopted by this Commission.

817 agencies consider in evaluating credit risk to a Company. Three key financial metrics
818 involve cash flow coverage of interest, cash flow as a percentage of debt, and debt
819 leverage ratio.

820 **Q. HOW ARE THESE FINANCIAL RATIOS CONSIDERED AND CALCULATED?**

821 A. Ratings agencies such as Standard & Poor's develop rating guidelines that make explicit
822 general ratings outcomes that are typical or expected given various financial and
823 business risk combinations. A rating matrix or guideline is just that, a guideline, not a
824 rule written in stone that guarantees a particular rating for a particular achieved financial
825 metric level.

826 Funds from a company's operations, in other words cash flow, are very critical to any
827 rating/risk consideration. Interest and principal obligations of a company cannot be paid
828 out of earnings if earnings are not cash. Thus, analyses of cash flow reveal debt
829 servicing ability.

830 Debt and capital structure considerations are indicative of leverage and flexibility to
831 address financial changes. The liquidity crisis that hit all markets and industries starting
832 last year is an example of the importance of financial flexibility. Stable and continuous
833 cash flows provide financial flexibility.

834 Each of these financial ratios is calculated in my Exhibit OCS 1.10 employing my
835 recommendations in this proceeding. The results of my analyses indicate strong
836 financial metrics.

837 The resulting financial metrics at a 10% equity return are consistent with a solid single
838 A bond rating.

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SECTION IX: RISK MITIGATION MEASURES AND MECHANISMS

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Q. WHAT ISSUE(S) ARE YOU ADDRESSING IN THIS SECTION OF YOUR TESTIMONY?

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A. In this section I address two specific risk mitigation measures that, if employed by the Company, will result in lower risk and capital cost going forward. I have previously addressed the Company's capital costs and concluded a 10% equity return is appropriate given known and measurable facts, but as I discuss below, the Company may employ risk mitigation measures going forward. The impact of such risk mitigation measures, if approved by this Commission and employed by the Company, will lower the Company's risk and lower the Company's cost of capital.

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Q. PLEASE DESCRIBE THE TYPE OF RISK MITIGATION MECHANISM THE COMPANY IS PROPOSING ON A FORWARD LOOKING BASIS?

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A. First, at page 17 of Mr. Walje's testimony he discusses opportunities for RMP to include major plant additions in rates without the need of filing a complete rate proceeding. Such single issue proceedings would be filed under the newly-enacted Utah Code Ann. §54-7-13.4 "Alternative cost recovery for major plant addition."

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Second, in RMP's filing in Docket No. 09-035-15, the Company is requesting an ECAM or fuel and purchased power adjustment mechanism. Currently, the Company collects fuel and purchased power costs through a Net Power Cost factor which is based on an estimate or forecast of future costs.

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Q. DOES THE COMPANY CLAIM IT FACES RISKS UNDER THE CURRENT METHOD OF FUEL AND PURCHASED POWER COST RECOVERY?

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A. Yes. In Docket No. 09-035-15, RMP witness Bruce Williams states:

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...the Company's net power costs are exposed to substantial volatility. This volatility could result in significant under recovery of costs. ...for example nearly \$400 million during 2007 and 2008... This under-recovery has contributed to what is generally seen by rating agencies as "weak" cash flow

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869 metrics.²²

870 Mr. Williams goes on to state: "...the right type of fuel and purchased power adjustment
871 mechanism would go a long way in controlling the risk of volatility in net power costs,
872 earnings and resulting cash flow."²³

873 Thus, the Company has proposed a recovery mechanism for fuel and purchased power,
874 ECAM, that will assure recovery of these costs – no matter the sales or energy prices.

875 **Q. PLEASE DESCRIBE HOW THE NEW STATUTE, UTAH CODE 57-7-13.4,**
876 **WILL LOWER RISK.**

877 A. The Company will have the ability to include the costs associated with major plant
878 additions in rates without the need of filing a major rate proceeding. Such plant addition
879 mechanisms allow the matching of cost recovery with in-service dates and eliminate the
880 impacts of regulatory lag and earnings erosion that may occur when plant additions are
881 completed. Again, this reduces the Company's risk of regulatory lag and earning
882 erosion.

883 **Q. WHAT FACTORS WILL BE CONSIDERED REGARDING CREDIT QUALITY**
884 **IF THE ECAM AND OTHER RISK MITIGATION MEASURES ARE**
885 **APPROVED?**

886 A. The key factor that will be considered as it relates to credit quality is that risk associated
887 with regulatory lag and earnings erosion will be shifted from shareholders to customers.

888 **Q. WILL THE IMPLEMENTATION OF THE PROPOSED ECAM AND MAJOR**
889 **PLANT ADDITIONS GUARANTEE THAT THE AUTHORIZED EQUITY**
890 **RETURN WILL BE EARNED?**

891 A. No. If approved by the Commission the implementation of the proposed ECAM and
892 major plant additions would assure that the authorized revenues subject to these
893 mechanisms, which include the Company's authorized return on investment, will be
894 collected.

²² Docket No. 09-035-15, Supplemental Direct Testimony of Bruce Williams at 3:67-4:73.

²³ *Id.* at 5:100-103.

895 **Q. HOW SHOULD THE COMMISSION CONSIDER THESE RISK MITIGATION**
896 **MEASURES IN SETTING EQUITY RETURN?**

897 A. In my opinion, when setting the equity return in this proceeding the Commission should
898 be mindful of these factors. For example, Mr. Walje makes clear in his testimony that
899 the Company fully intends to take advantage of section 54-7-13.4 for at least two
900 projects.²⁴ Further, given Mr. Walje's testimony at pages 23-24, the Company fully
901 anticipates taking full advantage of the ECAM for collecting future fuel costs.

902 Given the risk reduction impacts that will inure to the benefit of the Company when
903 such risk reduction mechanisms are employed – an equity return at the lower end of the
904 reasonable estimates may be most appropriate when setting rates in this case.

905 **SECTION X: CONCLUSION**

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907 **Q. PLEASE SUMMARIZE YOUR OVERALL COST OF CAPITAL**
908 **RECOMMENDATION IN THIS CASE.**

909 A. The Company's requested 11.0% return on equity is overstated. A more reasoned cost
910 of equity analysis results in a required return on shareholder equity of 10%. These
911 recommended adjustments results in an overall cost of capital of 8.03% in this case.

912 **Q. WILL YOUR RECOMMENDED RETURN PROVIDE THE COMPANY**
913 **SUFFICIENT INTEREST COVERAGE TO MAINTAIN ITS FINANCIAL**
914 **INTEGRITY?**

915 A. Yes. Based on the capital structure above, my recommended 8.03% overall cost of
916 capital provides coverage ratios of 3.71x and 2.76x for pretax and after-tax interest
917 coverage respectively. In my opinion, these coverage ratios are sufficient for the
918 Company to maintain financial integrity.

919 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

920 A. Yes.

²⁴ Direct Testimony of A. Richard Walje at 17:387-394.