

September 17, 2020

VIA ELECTRONIC FILING

Public Service Commission of Utah
Heber M. Wells Building, 4th Floor
160 East 300 South
Salt Lake City, UT 84114

Attention: Gary Widerburg
Commission Administrator

Re: Docket 20-035-04
Application of Rocky Mountain Power for Authority to Increase its Retail Electric Utility Service Rates in Utah and for Approval of its Proposed Electric Service Schedules and Electric Service Regulations
Phase I – Cost of Capital Rebuttal Testimony

Pursuant to the Scheduling Order, Notice of Technical Conference, Notice of Hearings, and Notice of Public Witness Hearing issued by the Public Service Commission of Utah, Rocky Mountain Power hereby submits for filing its Phase I – Cost of Capital rebuttal testimony and exhibits.

Rocky Mountain Power respectfully requests that all formal correspondence and requests for additional information regarding this filing be addressed to the following:

By E-mail (preferred): datarequest@pacificorp.com
jana.saba@pacificorp.com
matthew.mcvee@pacificorp.com
jacob.mcdermott@pacificorp.com
emily.wegener@pacificorp.com
dmmoscon@stoel.com

By regular mail: Data Request Response Center
PacifiCorp
825 NE Multnomah, Suite 2000
Portland, OR 97232

Utah Public Service Commission

September 17, 2020

Page 2

Informal inquiries may be directed to Jana Saba at (801) 220-2823.

Sincerely,

A handwritten signature in blue ink that reads "Joelle Steward". The signature is written in a cursive style with a large, stylized "J" and "S".

Joelle Steward

Vice President, Regulation

cc: Service List Docket No. 20-035-04

CERTIFICATE OF SERVICE

Docket No. 20-035-04

I hereby certify that on September 17, 2020, a true and correct copy of the foregoing was served by electronic mail and/or overnight delivery to the following:

Chris Parker (C)
William Powell (C)
Brenda Salter (C)
Division of Public Utilities
160 East 300 South, 4th Floor
Salt Lake City, UT 84111
ChrisParker@utah.gov
wpowell@utah.gov
bsalter@utah.gov
dpudatarequest@utah.gov

Patricia Schmid (C)
Justin Jetter (C)
Assistant Attorney General
Utah Division of Public Utilities
160 East 300 South, 5th Floor
Salt Lake City, UT 84111
pschmid@agutah.gov
jjetter@agutah.gov

Robert Moore (C)
Victor Copeland (C)
Assistant Attorney General
160 East 300 South, 5th Floor
P.O. Box 140857
Salt Lake City, Utah 84114-0857
rmoore@agutah.gov
vcopeland@agutah.gov

Alyson Anderson
Bela Vastag
Alex Ware
Utah Office of Consumer Services
160 East 300 South, 2nd Floor
Salt Lake City, UT 84111
akanderson@utah.gov
bvastag@utah.gov
aware@utah.gov
ocs@utah.gov

Peter J. Mattheis (C)
Eric J. Lacey (C)
STONE MATTHEIS XENOPOULOS & BREW,
P.C.
1025 Thomas Jefferson Street, N.W.
800 West Tower
Washington, D.C. 2007
pjm@smxblaw.com
ejl@smxblaw.com

Gary A. Dodge
Hatch James & Dodge
10 West Broadway, Suite 400
Salt Lake City, UT 84101
gdodge@hjdllaw.com

Jeremy R. Cook (C)
COHNE KINGHORN
111 East Broadway, 11th Floor
Salt Lake City, UT 84111
jcook@cohnekinghorn.com

Kurt J. Boehm, Esq.
Jody Kyler Cohn, Esq.
Richard A. Baudino
Boehm, Kurtz & Lowry
36 East Seventh Street, Suite 1510
Cincinnati, Ohio 45202
kboehm@BKLawfirm.com
jkylercohn@bkllawfirm.com
rbaudino@jkenn.com

William J. Evans
Vicki M. Baldwin (C)
Parsons Behle & Latimer
201 South Main Street, Suite 1800
Salt Lake City, Utah 84111
bevans@parsonsbehle.com
vbaldwin@parsonsbehle.com

Steve W. Chriss (C)
Director, Energy Services
Walmart, Inc.
2608 Southeast J Street
Bentonville, Arkansas 72712
stephen.chriss@walmart.com

Nancy Kelly (C)
Western Resource Advocates
9463 N. Swallow Rd.
Pocatello ID 83201
nkelly@westernresources.org

Sophie Hayes (C)
Western Resource Advocates
307 West 200 South, Suite 2000
Salt Lake City UT 84101
sophie.hayes@westernresources.org

D. Matthew Moscon
Lauren Shurman
Stoel Rives LLP
Matt.moscon@stoel.com
Lauren.shurman@stoel.com

Roger Swenson
US Magnesium, LLC
Roger.swenson@prodigy.net

Bryce Dalley
rbd@fb.com

Brian Dickman
bdickman@newgenstrategies.net

Scott Dunbar
Matthew Deal
sdunbar@keyesfox.com
matthew.deal@chargepoint.com
ChargePoint, Inc

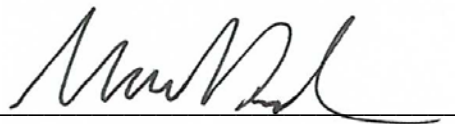
Phillip J. Russell (C)
HATCH, JAMES & DODGE, P.C.
10 West Broadway, Suite 400
Salt Lake City, Utah 84101
prussell@hjdllaw.com

Steven S. Michel
Western Resource Advocates
409 E. Palace Avenue, Unit 2
Santa Fe NM 87501
smichel@westernresources.org

Hunter Holman
Kate Bowman
Utah Clean Energy
hunter@utahcleanenergy.org
kate@utahcleanenergy

Irion A. Sanger
Joni Slinger
Sanger Law
irion@sanger-law.com
joni@sanger-law.com

Christopher F. Benson
Katie Carreau
University of Utah
Chris.benson@utah.edu
Katie.carreau@legal.utah.edu



Mary Penfield
Adviser, Regulatory Operations

Rocky Mountain Power
Docket No. 20-035-04
Witness: Gary W. Hoogeveen

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF UTAH

ROCKY MOUNTAIN POWER

Rebuttal Testimony of Gary W. Hoogeveen

September 2020

1 **I. INTRODUCTION**

2 **Q. Are you the same Gary W. Hoogeveen who filed direct testimony in this**
3 **proceeding on behalf of PacifiCorp d/b/a Rocky Mountain Power (“Rocky**
4 **Mountain Power” or the “Company”)?**

5 A. Yes.

6 **II. PURPOSE OF TESTIMONY**

7 **Q. What is the purpose of your rebuttal testimony in this proceeding?**

8 A. In my rebuttal testimony, I address the update the Company makes to its requested
9 return on equity (“ROE”) in this rate case in light of the COVID-19 pandemic and
10 related economic impacts. I also explain why the Company’s updated ROE is
11 appropriate in order to continue to deliver capital-intensive investments in its electric
12 system in a cost-effective manner. Finally, I introduce Company witnesses submitting
13 rebuttal testimony in the cost of capital phase of this proceeding.

14 **III. UPDATE TO THE COMPANY’S DIRECT CASE**

15 **Q. Have the impacts of the COVID-19 pandemic evolved since the filing of the**
16 **Company’s direct case?**

17 A. Yes. At the time the Company filed this rate case on May 8, 2020, Utah was still
18 operating under moderate risk protocols as a result of the COVID-19 pandemic. Under
19 the moderate risk protocols, gyms, salons, and other personal care businesses were
20 allowed to reopen and restaurants were allowed to resume dine-in services modified to
21 follow hygiene standards and social distancing guidelines.¹ On May 20, 2020, the state
22 set forth Utah Leads Together III, which continued the color-coded reopening plan

¹ <https://governor.utah.gov/2020/04/30/gov-herbert-issues-executive-order-placing-utah-under-moderate-risk-protocols-for-covid-19/>.

23 adopted in Utah Leads Together I on March 24, 2020, and focused on protecting high-
24 risk individuals and minority communities.² On June 17, 2020, the state set forth Utah
25 Leads Together IV, which provides Utah’s recovery and revitalization plan to emerge
26 from the COVID-19 pandemic with a stronger, more resilient, and inclusive economy.³
27 On June 29, 2020, Governor Gary Herbert approved a plan for reopening schools in the
28 fall.⁴ Currently, counties in Utah have moved from moderate risk protocols to either
29 low level restriction or minimal level restriction protocols.⁵

30 **Q. Has the Company updated its rebuttal position in response to the COVID-19**
31 **pandemic?**

32 A. Yes. To respond to the continued impact of the pandemic on its customers and
33 communities, the Company has updated its requested ROE in this rate case proceeding.
34 Specifically, in response to the economic difficulties being experienced by its
35 customers in the state of Utah, the Company is lowering its requested ROE from 10.2
36 percent to 9.8 percent, which is its currently authorized ROE.

37 **Q. Why is a 9.8 percent ROE appropriate in Utah?**

38 A. While the Company continues to believe the 10.20 percent ROE proposed in its initial
39 application fairly reflects the Company’s risk, the Company is reducing its requested
40 ROE to 9.8 percent in light of the current circumstances.⁶ Also important is the signal
41 that a reasonable ROE, such as 9.8 percent, and a strong equity position send to the
42 capital markets and rating agencies as the Company invests in a zero-fuel cost

² https://coronavirus-download.utah.gov/Governor/Utah_Leads_Together_3.0_May2020_v20.pdf.

³ https://coronavirus-download.utah.gov/Governor/Utah_Leads_Together_Version_4.0_061720.pdf.

⁴ <https://www.abc4.com/news/top-stories/governor-approves-board-of-education-requirements-recommendations-for-reopening-schools/>.

⁵ <https://coronavirus.utah.gov/utahs-health-guidance-system/>.

⁶ The impact to the revenue requirement resulting from the Company’s update to ROE will be discussed in the Company’s rebuttal testimony that will be filed on October 5, 2020.

43 generation portfolio with new and repowered wind generation resources and new
44 transmission, such as Energy Vision 2020. It is the Company's investment in these
45 capital-intensive projects that supports an energy future that decreases the amount of
46 emissions, while providing customers with the benefits of zero-fuel cost generation.
47 The capital structure and ROE supported by Ms. Nikki L. Kobliha and Ms. Ann E.
48 Bulkley, respectively, will enable the Company to undertake necessary investments in
49 a cost efficient manner that will be beneficial to customers. On the other hand, any
50 reduction to the Company's current capital structure and ROE will send the wrong
51 signal to the capital markets and rating agencies potentially slowing the Company's
52 cost-effective investment in zero-fuel cost generation and/or causing it and other
53 necessary transmission and distribution investments to be more costly.⁷

54 Furthermore, as I explained in my direct testimony, the Company has made a
55 concerted effort to manage its controllable costs since the Company's last filed general
56 rate case in 2014.⁸ While this rate case requests an increase in the overall revenue
57 requirement, the filing reflects the Company's prudent and efficient management of its
58 costs that has allowed it to avoid seeking an increase in base rates for seven years.
59 During this stay-out period, the Company has continued to invest in its power system,
60 transform its generation resource portfolio, pioneer a new energy market that saves
61 customers money and reduces emissions, and adhere to its core mission of providing
62 safe, reliable, and affordable service for customers. Allowing the Company to maintain

⁷ Direct Testimony of Ann E. Bulkley at 67-76.

⁸ *In the Matter of the Application of Rocky Mountain Power for Authority to Increase its Retail Electric Utility Service Rates in Utah and for Approval of its Proposed Electric Service Schedules and Electric Service Regulations*, Docket No. 13-035-184, Report and Order Approving the Settlement Stipulation dated June 25, 2014. (Aug. 29, 2014).

63 its currently authorized ROE will provide it an opportunity to continue this trend to
64 stay out of rate cases and allow it to make necessary investments in a cost-effective
65 manner, while earning a reasonable return on its investment.

66 **IV. INTRODUCTION OF REBUTTAL WITNESSES**

67 **Q. Please identify the witnesses supporting the Company's cost of capital rebuttal**
68 **testimony.**

69 A. In addition to myself, the Company witnesses filing cost of capital rebuttal testimony
70 are as follows:

71 **Nikki L. Koblaha**, Vice President, Chief Financial Officer and Treasurer, discusses the
72 Company's updated cost of capital recommendation and responds to intervenor
73 testimony regarding capital structure.

74 **Ann E. Bulkley**, economist and principal at Concentric Energy Advisors, supports the
75 Company's revised recommendation for ROE. She also responds to intervenor ROE
76 recommendations.

77 **Q. Does this conclude your cost of capital rebuttal testimony?**

78 A. Yes.

REDACTED

Rocky Mountain Power

Docket No. 20-035-04

Witness: Nikki L. Kobliha

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF UTAH

ROCKY MOUNTAIN POWER

REDACTED

Rebuttal Testimony of Nikki L. Kobliha

September 2020

1 **Q. Are you the same Nikki L. Kobliha who previously submitted direct testimony in**
2 **this proceeding on behalf of PacifiCorp d/b/a Rocky Mountain Power**
3 **(“PacifiCorp” or the “Company”)?**

4 A. Yes, I am.

5 **I. PURPOSE AND SUMMARY OF TESTIMONY**

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

7 A. I will respond to certain issues raised by intervening parties in their direct testimony
8 filed with the Public Service Commission of Utah (“Commission”).

9 **Q. Please explain how your testimony is organized and the issues you will address in**
10 **your rebuttal testimony.**

11 A. I will comment on the following issues and recommendations and explain why my
12 analysis continues to support the capital structure proposed in my direct testimony.

13 1. In Section II, I will provide the Commission with an updated cost of capital
14 reflecting an interest rate update for the projected variable rate debt, plus a new
15 return on equity.

16 2. In Section III, I respond to the recommendations by Dr. J. Randall Woolridge
17 sponsored by the Office of Consumer Services (“OCS”) on the Company’s
18 proposed capital structure and explain why the Company’s proposed capital
19 structure is reasonable and necessary.

20 **II. UPDATED COST OF CAPITAL**

21 **Q. Please discuss the recent financing work that the Company has completed.**

22 A. As provided in my direct testimony, during April 2020, the Company completed the
23 issuance of two new series of long-term debt — \$400 million of 2.70 percent first

24 mortgage bonds due September 2030 and \$600 million of 3.30 percent first mortgage
25 bonds due March 2051. The Company does not anticipate any further long-term debt
26 issuances will be required through the end of the 2021 calendar year period, nor any
27 dividend payments to Berkshire Hathaway Energy in 2020 or 2021.

28 **Q. Please explain any interest rates that have been updated.**

29 A. I have updated the projected rates for the Company's variable rate long-term debt. As
30 more fully described in my direct testimony, the Company will have on average
31 \$218 million in principal amount of these variable rate securities during the test period.
32 The projected interest rates on these securities is based on forward 30-day London
33 Interbank Offer Rate ("LIBOR") rates at each future quarter-end spanning the test
34 period. I have updated with current forward 30-day LIBOR rates during the test period
35 and also updated the historical relationship for these securities through July 2020 as
36 reflected in Exhibit RMP___(NLK-1R). The result of this update is that these securities
37 are now expected to have a reduced percentage average cost (including the cost of
38 issuance and credit enhancements) during the test period of 0.63 percent versus the
39 prior projected average cost of 1.61 percent reflected for my direct testimony.

40 **Q. What is the new cost of debt?**

41 A. As shown in Exhibit RMP___(NLK-2R), the net impact from these described changes
42 above results in a reduction to the overall cost of long-term debt of two basis points,
43 making the new cost of debt 4.79 percent.

44 **Q. Are you currently recommending an update to the percentage capital structure
45 recommendation in your direct testimony for PacifiCorp?**

46 A. I continue to recommend a 53.67 percent equity level capital structure as detailed in

47 my direct testimony. At the 53.67 percent the Company will remain financially sound
48 and keep costs low for customers while transforming its generation portfolio.

49 **Q. What overall cost of capital do you recommend for PacifiCorp?**

50 A. I am recommending an overall cost of capital of 7.48 percent. This cost includes the
51 return on equity recommendation of 9.80 percent, supported by the rebuttal testimony
52 of Company witnesses Mr. Gary W. Hoogeveen and Ms. Ann E. Bulkley. The capital
53 structure and costs are shown in Table 1.

54 **Table 1: Overall Cost of Capital**

Component	% of Total	Cost %	Weighted Ave Cost %
Long-Term Debt	46.32 %	4.79%	2.22 %
Preferred Stock	0.01 %	6.75%	— %
Common Stock Equity	53.67 %	9.80%	5.26 %
	100.00 %		7.48 %

55 **III. CAPITAL STRUCTURE**

56 **Q. Please summarize Dr. Woolridge’s position on the Company’s capital structure.**

57 A. Dr. Woolridge recommends a capital structure consisting of 50.00 percent common
58 equity. He supports this by comparing the Company’s common equity ratio to the
59 average 2019 common equity ratio of a group of proxy companies that he has dubbed
60 the “Electric Proxy Group” at the holding company level and inclusive of short-term
61 debt. Dr. Woolridge concludes that the Electric Proxy Group funds their utility assets
62 at an average common equity ratio of 44.00 percent.

63 **Q. Do you agree with Dr. Woolridge’s approach and conclusions?**

64 A. No, for several reasons. First, the Company is requesting a capital structure including
65 a 53.67 percent equity level using an average of the five quarter-ending balances

66 spanning the test period. This approach has been accepted by the Commission in
67 Rocky Mountain Power's prior applications and facilitates comparisons over time.¹ In
68 addition, the Company expects to maintain its actual capital structure at this level for
69 reasons Dr. Woolridge's recommendation fails to consider, including the Company's
70 forecasted capital spending requirements and the impact of the 2017 Tax Cut and Jobs
71 Act, both of which will necessitate an equity level at the proposed 53.67 percent to
72 ensure rating agency metrics can be met and the Company's current credit ratings
73 maintained. Maintaining the Company's current credit rating is critical to ensure
74 continued access to capital markets at a reasonable cost.

75 Second, I believe the proper proxy group comparison is at the utility operating
76 company level as presented in Exhibit RMP___ (AEB-11) prepared by Ms. Bulkley in
77 direct testimony and not the utility holding company level. Use of the utility operating
78 company level provides a direct comparison to the entities providing the utility service,
79 entities that often have common financing practices and objectives. Ms. Bulkley's
80 exhibit shows the low, high and mean of the proxy group average equity ratios are
81 47.49 percent, 61.54 percent and 52.73 percent. The Company's proposed capital
82 structure is well within this range. Holding companies may have non-utility
83 investments that influence their financing practices and objectives. For example WEC
84 Energy Group, noted in the Electric Proxy Group, includes Wispark, a company that
85 develops complex real estate projects. This demonstrates use of holding company

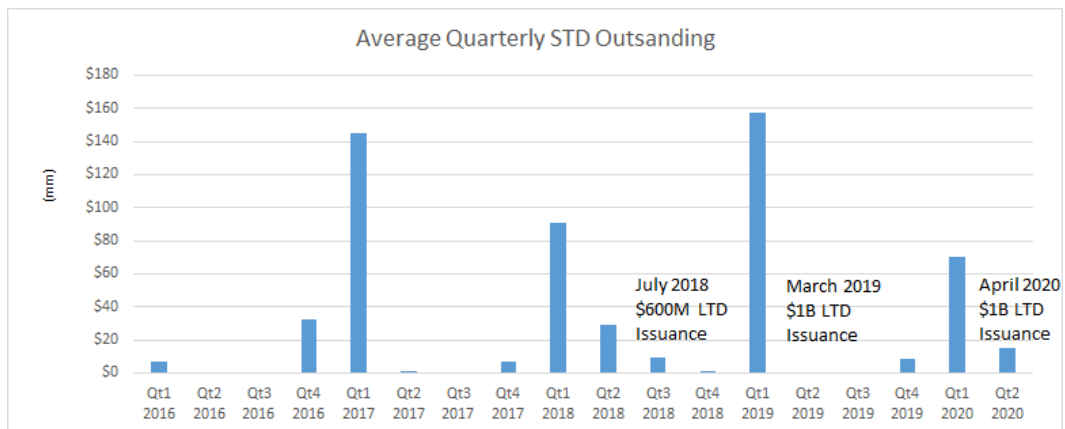
¹ See *In the Matter of the Application of Rocky Mountain Power for Authority to Increase its Retail Electric Utility Service Rates in Utah and for Approval of its Proposed Electric Service Schedules and Electric Service Regulations*, Docket No. 09-035-23, Report and Order on Revenue Requirement and Cost of Service and Spread of Rates, at 15 (Feb. 18, 2010) (accepting the Company's cost of capital position because the five-quarter average "smooths out the variability which is inherent in the lumpy nature of equity infusions and debt issuances").

86 comparisons for capital structure can cause distortions.

87 Third, Dr. Woolridge includes an assumption of short-term debt when preparing
88 his recommended capital structure. The Company believes that it is inappropriate and
89 inequitable to include short-term debt in the capital structure as short-term debt would
90 effectively be double-counted as financing both rate base and construction work in
91 progress. Short-term debt balances can move dramatically and as demonstrated in
92 Table 2 below, the Company often has periods of time when there is no short-term debt
93 outstanding, demonstrating that short-term debt is not a permanent source of financing
94 rate base.

95 Periods of high short-term debt generally occur right before the Company is
96 about to issue long-term debt as issuances are normally timed around an upcoming
97 long-term debt maturity or other significant cash outflow.

98 **Table 2: Average Quarterly Short Term Debt Outstanding**



99 **Q. Please comment on the use of Berkshire Hathaway Energy debt to finance the**
100 **equity in Rocky Mountain Power.**

101 **A.** Dr. Woolridge references a definition of double leverage supplied by Moody's
102 wherein a parent company raises debt and provides the proceeds to its operating

103 subsidiary in the form of an equity investment.² Rocky Mountain Power finances its
104 own operations through ongoing cash from operations, short-term debt which is
105 generally commercial paper, and long-term debt using secured first mortgage bonds.
106 It is not the Company's practice to receive regular capital contributions from
107 Berkshire Hathaway Energy, which they may or may not have issued debt to fund. In
108 fact, the last time the Company received a capital contribution from Berkshire
109 Hathaway Energy was in 2010, and no capital contributions are anticipated to occur
110 in the foreseeable future. To conclude Berkshire Hathaway Energy is using debt to
111 finance the equity in the Company is not accurate.

112 **Q. In your direct testimony, you note the proposed capital structure is consistent with**
113 **the Company's current credit rating and the ability to achieve financial metrics.**
114 **Dr. Woolridge concludes you provide no evidence to support this statement. How**
115 **do you respond?**

116 A. My direct testimony makes specific reference to the requirements from Moody's³ to
117 maintain its credit rating which include a ratio of CFO pre-W/C to debt ratio in excess
118 of 20 percent. Because there are several inputs to the CFO pre-W/C to debt ratio, it is
119 difficult to estimate what the ratio would at various capitalization levels. However,
120 looking at recent historical data and estimated impacts through the remainder of 2020,
121 I have replicated Moody's CFO pre-W/C to debt ratio calculation in order to provide a
122 high-level indicator of where this metric may land if a capital structure less than the
123 level proposed by the Company was awarded. Based on the Company's 12 months

² Direct Testimony of Dr. Woolridge, at lines 574-602.

³ The FFO to Debt ratio used by Moody's is referred to as "CFO Pre-W/C / Debt" in Moody's credit opinion updates. The Company is focusing on the Moody's rating as it is the lower of the two corporate ratings from the agencies.

REDACTED

124 ended June 30, 2020 results, the CFO pre-W/C to debt ratio is [REDACTED] The [REDACTED]
125 in this metric as calculated for the most recent 12-month period compared to the
126 calendar year 2019 period result of 18.4 percent [REDACTED]

127 [REDACTED]
128 [REDACTED]
129 [REDACTED]
130 [REDACTED]
131 [REDACTED]

132 [REDACTED] The Company's current
133 forecast for the 12 months ended December 31, 2020 period for the Moody's CFO pre-
134 W/C to debt ratio is [REDACTED] and is based on a projected average common equity
135 percentage of 51.6 percent for the period, which is 207 basis points lower than the
136 equity levels forecast during the test period and 160 basis points higher than the level
137 recommended by Dr. Woolridge. With a low metric result reported in 2019 [REDACTED]

138 [REDACTED]
139 [REDACTED]

140 [REDACTED] without thickening the equity to the requested levels and favorable
141 regulatory support during the Company's continuing capital growth cycle.

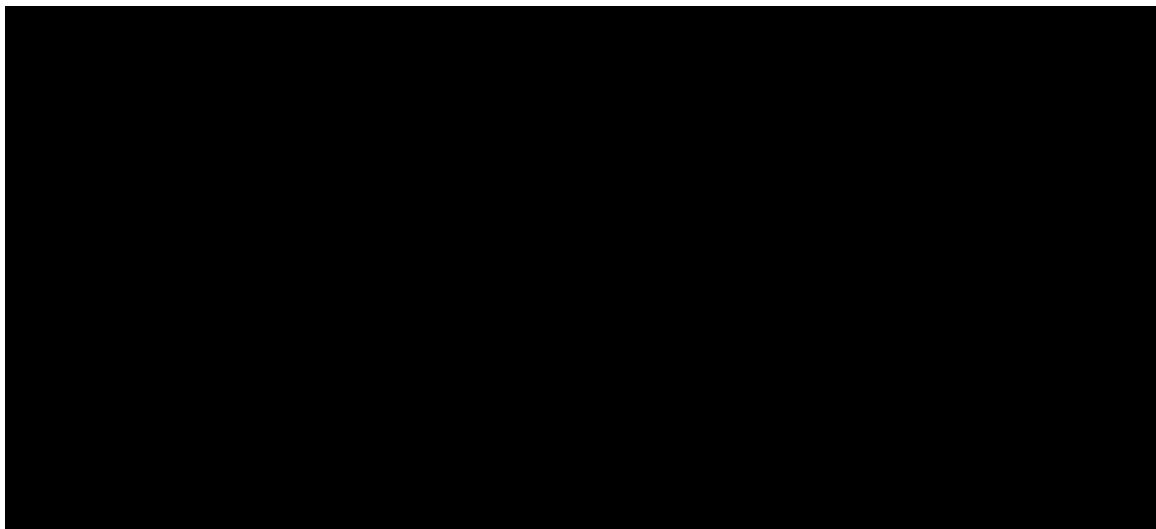
142 **Q. What do you mean by favorable regulatory support?**

143 A. The Company can manage the capital structure through the timing and amount of long-
144 term debt issuances and dividend distributions; however, there are neither long term
145 debt issuances nor dividend distributions planned for 2021. Hence, PacifiCorp must
146 rely on continued regulatory support to recover costs and achieve a reasonable rate of

REDACTED

147 return to have adequate cash from operations during this period of growth when
148 additional debt issuance would increasingly dampen the Company’s already stressed
149 key CFO pre-W/C to debt credit metric. A reasonable rate of return on a capital
150 structure of 53.67 percent equity would constitute favorable regulatory support in this
151 instance.

152 Favorable regulatory support is a contributing factor to the rating agencies
153 assessment of PacifiCorp as noted in the following quote from Moody’s:



154
155
156
157
158
159
160
161
162
163
164

165 **Q. Dr. Woolridge indicates the Company’s credit ratings are superior to the**
166 **average of the two electric proxy groups. Do you think that the Company is**
167 **seeking a credit rating that is higher than is necessary to provide the lowest cost**
168 **of capital for customers?**

169 **A.** No. The Company and its customers have benefited and will continue to benefit from
170 the Company’s credit rating, and industry analysts support that a single A credit rating
171 is in the best interest of customers. My direct testimony notes this rating has benefited
172 the Company, and therefore customers, through lower rates on 14 series of debt when

⁴ Moody’s Investor Services, Credit Opinion (June 25, 2020) at 1

⁵ S&P Global Ratings, Ratings Direct (April 8, 2020) at 5

173 compared to lower rated entities, and during times of market turmoil. In particular,
174 during the Great Recession of 2008-2009 PacifiCorp was able to issue long-term debt
175 during the midst of the turmoil at reasonable rates. Not all entities were able to issue
176 debt, and some of those who could issue debt did so at high rates due to their lower
177 credit ratings.

178 The Company, and utilities in general, do not have a significant amount of
179 flexibility when they access capital markets due to their obligation to serve customers.
180 Being able to access capital markets in any condition at low costs will help keep rates
181 low for customers. The Company's current credit rating has enabled such low cost
182 access.

183 In addition, as represented in the following quote from New Regulatory
184 Finance, Roger A. Morin, PhD textbook:

185 The optimal capital structuresuggests that long-term
186 achievement of a single A credit rating is in a utility company's
187 and its ratepayers best interests. Debt leverage targets should be
188 set in the lower part of the range required to attain this optimal
189 rating. If the company maintains its debt ratio close to the
190 optimal range required for a single A bond rating, its overall
191 cost of capital should be minimized.

192 As suggested by the textbook, the Company's efforts to maintain its current credit
193 ratings will minimize its overall cost of capital. In my opinion, the optimal capital
194 structure for the Company at this time is the requested 53.67 percent equity, which will
195 enable the Company to maintain current credit ratings and have continued access to
196 capital markets at a reasonable cost.

197 **Q. What is your recommendation regarding the Company's capital structure?**

198 A. For the reasons noted above, I recommend the equity component of the capital structure

199 remain at the 53.67 percent included in my direct testimony.

200 **Q. Does that conclude your testimony?**

201 **A. Yes.**

Rocky Mountain Power
Exhibit RMP__(NLK-1R)
Docket No. 20-035-04
Witness: Nikki L. Kobliha

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF UTAH

ROCKY MOUNTAIN POWER

Exhibit Accompanying Rebuttal Testimony of Nikki L. Kobliha

Indicative Forward PCRБ Variable Rates

September 2020

**Indicative Forward PCRB Variable Rates
For Quarter End Periods for Year Ending December 31, 2021**

	30 Day LIBOR Daily Ave	Floating Rate PCRBs Daily Ave	PCRB / LIBOR
	(a)	(b)	(b)/(a)
Jan-00	5.81%	3.33%	57%
Feb-00	5.89%	3.62%	62%
Mar-00	6.05%	3.68%	61%
Apr-00	6.16%	4.02%	65%
May-00	6.54%	4.89%	75%
Jun-00	6.65%	4.35%	65%
Jul-00	6.63%	3.99%	60%
Aug-00	6.62%	4.09%	62%
Sep-00	6.62%	4.50%	68%
Oct-00	6.62%	4.36%	66%
Nov-00	6.63%	4.33%	65%
Dec-00	6.68%	4.14%	62%
Jan-01	5.88%	3.10%	53%
Feb-01	5.53%	3.59%	65%
Mar-01	5.13%	3.18%	62%
Apr-01	4.82%	3.72%	77%
May-01	4.16%	3.38%	81%
Jun-01	3.92%	3.03%	77%
Jul-01	3.82%	2.65%	69%
Aug-01	3.64%	2.36%	65%
Sep-01	3.17%	2.42%	76%
Oct-01	2.48%	2.18%	88%
Nov-01	2.13%	1.79%	84%
Dec-01	1.96%	1.64%	84%
Jan-02	1.81%	1.49%	82%
Feb-02	1.85%	1.39%	75%
Mar-02	1.89%	1.46%	77%
Apr-02	1.86%	1.58%	85%
May-02	1.84%	1.67%	91%
Jun-02	1.84%	1.58%	86%
Jul-02	1.83%	1.49%	81%
Aug-02	1.80%	1.49%	83%
Sep-02	1.82%	1.69%	93%
Oct-02	1.81%	1.84%	102%
Nov-02	1.44%	1.66%	115%
Dec-02	1.42%	1.57%	110%
Jan-03	1.36%	1.40%	103%
Feb-03	1.34%	1.43%	107%
Mar-03	1.31%	1.45%	111%
Apr-03	1.31%	1.52%	115%
May-03	1.31%	1.56%	119%
Jun-03	1.16%	1.38%	119%
Jul-03	1.11%	1.12%	102%
Aug-03	1.11%	1.16%	104%
Sep-03	1.12%	1.24%	111%
Oct-03	1.12%	1.24%	111%
Nov-03	1.13%	1.36%	121%
Dec-03	1.15%	1.32%	114%
Jan-04	1.11%	1.21%	110%
Feb-04	1.10%	1.17%	107%
Mar-04	1.09%	1.20%	110%
Apr-04	1.10%	1.27%	115%
May-04	1.10%	1.29%	117%
Jun-04	1.25%	1.28%	102%
Jul-04	1.41%	1.26%	89%
Aug-04	1.60%	1.40%	88%
Sep-04	1.78%	1.49%	83%
Oct-04	1.90%	1.72%	91%
Nov-04	2.19%	1.65%	75%
Dec-04	2.39%	1.67%	70%
Jan-05	2.49%	1.78%	72%
Feb-05	2.61%	1.88%	72%
Mar-05	2.81%	1.95%	69%
Apr-05	2.97%	2.50%	84%
May-05	3.09%	2.93%	95%
Jun-05	3.25%	2.39%	74%
Jul-05	3.43%	2.28%	67%
Aug-05	3.69%	2.44%	66%
Sep-05	3.78%	2.55%	68%
Oct-05	3.99%	2.66%	67%

**Indicative Forward PCRB Variable Rates
 For Quarter End Periods for Year Ending December 31, 2021**

	30 Day LIBOR Daily Ave	Floating Rate PCRBs Daily Ave	PCRB / LIBOR
	(a)	(b)	(b)/(a)
Nov-05	4.15%	2.93%	71%
Dec-05	4.36%	3.10%	71%
Jan-06	4.48%	3.02%	67%
Feb-06	4.58%	3.13%	68%
Mar-06	4.76%	3.11%	65%
Apr-06	4.92%	3.45%	70%
May-06	5.08%	3.52%	69%
Jun-06	5.24%	3.74%	71%
Jul-06	5.37%	3.60%	67%
Aug-06	5.35%	3.53%	66%
Sep-06	5.33%	3.61%	68%
Oct-06	5.32%	3.57%	67%
Nov-06	5.32%	3.62%	68%
Dec-06	5.35%	3.70%	69%
Jan-07	5.32%	3.64%	68%
Feb-07	5.32%	3.63%	68%
Mar-07	5.32%	3.64%	68%
Apr-07	5.32%	3.79%	71%
May-07	5.32%	3.90%	73%
Jun-07	5.32%	3.76%	71%
Jul-07	5.32%	3.66%	69%
Aug-07	5.52%	3.76%	68%
Sep-07	5.48%	3.84%	70%
Oct-07	4.98%	3.56%	72%
Nov-07	4.75%	3.53%	74%
Dec-07	5.00%	3.25%	65%
Jan-08	3.95%	3.02%	76%
Feb-08	3.14%	2.86%	91%
Mar-08	2.80%	3.79%	135%
Apr-08	2.79%	2.23%	80%
May-08	2.63%	1.93%	73%
Jun-08	2.47%	2.77%	112%
Jul-08	2.46%	4.12%	168%
Aug-08	2.47%	3.03%	123%
Sep-08	2.94%	4.57%	155%
Oct-08	3.87%	4.89%	126%
Nov-08	1.68%	2.34%	139%
Dec-08	1.01%	1.02%	101%
Jan-09	0.39%	0.70%	181%
Feb-09	0.46%	0.68%	147%
Mar-09	0.53%	0.66%	124%
Apr-09	0.45%	0.63%	140%
May-09	0.35%	0.53%	153%
Jun-09	0.32%	0.45%	143%
Jul-09	0.29%	0.41%	142%
Aug-09	0.27%	0.43%	158%
Sep-09	0.25%	0.40%	161%
Oct-09	0.24%	0.39%	159%
Nov-09	0.24%	0.37%	157%
Dec-09	0.23%	0.38%	165%
Jan-10	0.23%	0.32%	138%
Feb-10	0.23%	0.32%	137%
Mar-10	0.24%	0.32%	135%
Apr-10	0.26%	0.35%	134%
May-10	0.33%	0.34%	101%
Jun-10	0.35%	0.33%	93%
Jul-10	0.33%	0.30%	90%
Aug-10	0.27%	0.31%	115%
Sep-10	0.26%	0.31%	119%
Oct-10	0.26%	0.27%	106%
Nov-10	0.25%	0.27%	107%
Dec-10	0.26%	0.29%	110%
Jan-11	0.26%	0.26%	100%
Feb-11	0.26%	0.26%	98%
Mar-11	0.25%	0.24%	96%
Apr-11	0.22%	0.24%	106%
May-11	0.20%	0.20%	100%
Jun-11	0.19%	0.12%	62%
Jul-11	0.19%	0.07%	38%
Aug-11	0.21%	0.18%	83%

**Indicative Forward PCRB Variable Rates
For Quarter End Periods for Year Ending December 31, 2021**

	30 Day LIBOR Daily Ave	Floating Rate PCRBs Daily Ave	PCRB / LIBOR
	(a)	(b)	(b)/(a)
Sep-11	0.23%	0.18%	78%
Oct-11	0.24%	0.17%	69%
Nov-11	0.25%	0.18%	70%
Dec-11	0.28%	0.18%	62%
Jan-12	0.28%	0.18%	64%
Feb-12	0.25%	0.22%	86%
Mar-12	0.24%	0.20%	84%
Apr-12	0.24%	0.25%	104%
May-12	0.24%	0.22%	90%
Jun-12	0.24%	0.19%	78%
Jul-12	0.25%	0.17%	68%
Aug-12	0.24%	0.16%	68%
Sep-12	0.22%	0.18%	81%
Oct-12	0.21%	0.20%	93%
Nov-12	0.21%	0.20%	95%
Dec-12	0.21%	0.15%	71%
Jan-13	0.21%	0.10%	51%
Feb-13	0.20%	0.13%	63%
Mar-13	0.20%	0.13%	66%
Apr-13	0.20%	0.18%	92%
May-13	0.20%	0.18%	90%
Jun-13	0.19%	0.11%	57%
Jul-13	0.19%	0.08%	43%
Aug-13	0.18%	0.09%	47%
Sep-13	0.18%	0.09%	49%
Oct-13	0.17%	0.10%	61%
Nov-13	0.17%	0.13%	78%
Dec-13	0.17%	0.14%	82%
Jan-14	0.16%	0.12%	74%
Feb-14	0.16%	0.11%	74%
Mar-14	0.15%	0.11%	73%
Apr-14	0.15%	0.13%	87%
May-14	0.15%	0.12%	80%
Jun-14	0.15%	0.10%	67%
Jul-14	0.15%	0.09%	61%
Aug-14	0.16%	0.09%	61%
Sep-14	0.15%	0.09%	55%
Oct-14	0.15%	0.08%	55%
Nov-14	0.15%	0.09%	59%
Dec-14	0.16%	0.08%	50%
Jan-15	0.17%	0.06%	38%
Feb-15	0.17%	0.06%	36%
Mar-15	0.18%	0.06%	35%
Apr-15	0.18%	0.09%	50%
May-15	0.18%	0.15%	79%
Jun-15	0.19%	0.13%	69%
Jul-15	0.19%	0.10%	55%
Aug-15	0.20%	0.09%	46%
Sep-15	0.20%	0.09%	47%
Oct-15	0.19%	0.10%	50%
Nov-15	0.21%	0.09%	45%
Dec-15	0.35%	0.08%	24%
Jan-16	0.43%	0.09%	20%
Feb-16	0.43%	0.08%	20%
Mar-16	0.44%	0.19%	45%
Apr-16	0.44%	0.41%	94%
May-16	0.44%	0.41%	93%
Jun-16	0.45%	0.43%	95%
Jul-16	0.48%	0.43%	89%
Aug-16	0.51%	0.49%	96%
Sep-16	0.53%	0.71%	134%
Oct-16	0.53%	0.77%	146%
Nov-16	0.56%	0.58%	103%
Dec-16	0.71%	0.66%	93%
Jan-17	0.77%	0.69%	89%
Feb-17	0.78%	0.66%	84%
Mar-17	0.93%	0.71%	77%
Apr-17	0.99%	0.90%	91%
May-17	1.01%	0.82%	81%
Jun-17	1.17%	0.83%	71%

**Indicative Forward PCRB Variable Rates
 For Quarter End Periods for Year Ending December 31, 2021**

	30 Day LIBOR Daily Ave	Floating Rate PCRBs Daily Ave	PCRB / LIBOR
	(a)	(b)	(b)/(a)
Jul-17	1.23%	0.85%	69%
Aug-17	1.23%	0.79%	65%
Sep-17	1.23%	0.87%	71%
Oct-17	1.24%	0.93%	75%
Nov-17	1.29%	0.96%	75%
Dec-17	1.49%	1.25%	84%
Jan-18	1.56%	1.35%	86%
Feb-18	1.60%	1.10%	69%
Mar-18	1.80%	1.32%	73%
Apr-18	1.90%	1.75%	92%
May-18	1.95%	1.46%	75%
Jun-18	2.07%	1.33%	64%
Jul-18	2.08%	1.10%	53%
Aug-18	2.07%	1.53%	74%
Sep-18	2.18%	1.56%	72%
Oct-18	2.29%	1.60%	70%
Nov-18	2.32%	1.69%	73%
Dec-18	2.45%	1.70%	69%
Jan-19	2.51%	1.43%	57%
Feb-19	2.49%	1.64%	66%
Mar-19	2.49%	1.67%	67%
Apr-19	2.48%	1.90%	77%
May-19	2.44%	1.72%	70%
Jun-19	2.40%	1.79%	74%
Jul-19	2.31%	1.45%	63%
Aug-19	2.17%	1.45%	67%
Sep-19	2.04%	1.48%	72%
Oct-19	1.88%	1.41%	75%
Nov-19	1.74%	1.18%	68%
Dec-19	1.75%	1.34%	77%
Jan-20	1.67%	1.10%	66%
Feb-20	1.64%	1.21%	74%
Mar-20	0.92%	2.68%	292%
Apr-20	0.68%	0.85%	124%
May-20	0.19%	0.27%	139%
Jun-20	0.18%	0.19%	102%
Jul-20	0.17%	0.21%	125%
Average			85%

	Forward 30 Day LIBOR*	Historical Floating Rate PCRB / 30 Day LIBOR	Forecast Floating Rate PCRB (1) * (2)
	(1)	(2)	(1) * (2)
12/31/20	0.27%	85%	0.227%
3/31/21	0.20%	85%	0.174%
6/30/21	0.19%	85%	0.159%
9/30/21	0.19%	85%	0.160%
12/31/21	0.21%	85%	0.182%
5QE Ave			0.180%

* Source: Bloomberg L.P. (8/20/20)

Rocky Mountain Power
Exhibit RMP__(NLK-2R)
Docket No. 20-035-04
Witness: Nikki L. Kobliha

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF UTAH

ROCKY MOUNTAIN POWER

Exhibit Accompanying Rebuttal Testimony of Nikki L. Kobliha

Weighted Average Cost of LTD Pro-forma

September 2020

PACIFICORP
 Electric Operations
 Pro forma Ave Cost of Long-Term Debt Summary
 12 months ended December 31, 2021

LINE NO.	INTEREST RATE	DESCRIPTION	ISSUANCE DATE	MATURITY DATE	ORIG LIFE	PRINCIPAL AMOUNT		ISSUANCE EXPENSES	REDEMPTION EXPENSES	NET PROCEEDS TO COMPANY		MONEY TO COMPANY	ANNUAL DEBT SERVICE COST	LINE NO.
						ORIGINAL	SOE AVE OUTSTANDING			DOLLAR AMOUNT	PER \$100 PRINCIPAL AMOUNT			
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	
1														1
2														2
3	3.850%	Series due Jun 2021	05/12/11	06/15/21	10	\$400,000,000	\$160,000,000	(\$1,500,455)	\$0	\$158,499,545	\$99,062	3.963%	\$6,340,800	3
4	2.950%	Series due Feb 2022	01/06/12	02/01/22	10	\$350,000,000	\$350,000,000	(\$2,732,350)	\$0	\$347,267,650	\$99,219	3.040%	\$10,640,000	4
5	2.950%	Series due Feb 2022 (2)	03/06/12	02/01/22	10	\$100,000,000	\$100,000,000	(\$173,129)	(\$4,970,793)	\$94,856	\$94,856	3.571%	\$3,571,000	5
6	2.950%	Series due Jun 2023	06/06/13	06/01/23	10	\$300,000,000	\$300,000,000	(\$2,759,352)	\$0	\$297,240,648	\$99,080	3.058%	\$9,174,000	6
7	3.600%	Series due Apr 2024	03/13/14	04/01/24	10	\$425,000,000	\$425,000,000	(\$3,600,164)	(\$1,943,075)	\$419,456,761	\$98,696	3.757%	\$15,967,250	7
8	3.350%	Series due Jul 2025	06/19/15	07/01/25	10	\$250,000,000	\$250,000,000	(\$2,441,421)	\$0	\$247,558,579	\$99,023	3.466%	\$8,665,000	8
9	3.500%	Series due Jun 2029	03/01/19	06/15/29	10	\$400,000,000	\$400,000,000	(\$2,874,181)	\$0	\$397,125,819	\$99,281	3.584%	\$14,336,000	9
10	2.700%	Series due Sep 2030	04/08/20	09/15/30	10	\$400,000,000	\$400,000,000	(\$2,880,000)	\$0	\$397,120,000	\$99,280	2.780%	\$11,120,000	10
11	7.700%	Series due Nov 2031	11/21/01	11/15/31	30	\$300,000,000	\$300,000,000	(\$3,701,310)	\$0	\$296,298,690	\$98,766	7.807%	\$23,421,000	11
12	5.900%	Series due Aug 2034	08/24/04	08/15/34	30	\$200,000,000	\$200,000,000	(\$2,614,365)	\$0	\$197,385,635	\$98,693	5.994%	\$11,988,000	12
13	5.250%	Series due Jun 2035	06/08/05	06/15/35	30	\$300,000,000	\$300,000,000	(\$3,992,021)	(\$1,295,995)	\$294,711,984	\$98,843	5.369%	\$16,107,000	13
14	6.100%	Series due Aug 2036	08/10/06	08/01/36	30	\$350,000,000	\$350,000,000	(\$4,048,881)	\$0	\$345,951,119	\$98,837	6.185%	\$21,647,500	14
15	5.750%	Series due Apr 2037	03/14/07	04/01/37	30	\$600,000,000	\$600,000,000	(\$6,132,161)	\$0	\$599,386,784	\$99,898	5.757%	\$34,542,000	15
16	6.250%	Series due Oct 2037	10/03/07	10/15/37	30	\$600,000,000	\$600,000,000	(\$5,877,281)	\$0	\$594,122,719	\$99,020	6.323%	\$37,938,000	16
17	6.350%	Series due Jul 2038	07/17/08	07/15/38	30	\$300,000,000	\$300,000,000	(\$3,961,333)	\$0	\$296,038,667	\$98,680	6.450%	\$19,350,000	17
18	6.000%	Series due Jan 2039	01/08/09	01/15/39	30	\$650,000,000	\$650,000,000	(\$12,309,687)	\$0	\$637,690,313	\$98,106	6.139%	\$39,903,500	18
19	4.100%	Series due Feb 2042	01/06/12	02/01/42	30	\$300,000,000	\$300,000,000	(\$3,724,911)	\$0	\$296,275,089	\$98,758	4.173%	\$12,519,000	19
20	4.125%	Series due Jan 2049	07/13/18	01/15/49	31	\$600,000,000	\$600,000,000	(\$6,984,085)	\$0	\$593,015,915	\$98,836	4.193%	\$25,158,000	20
21	4.150%	Series due Feb 2050	03/01/19	02/15/50	31	\$600,000,000	\$600,000,000	(\$7,938,771)	\$0	\$592,061,229	\$98,677	4.227%	\$25,362,000	21
22	3.300%	Series due Mar 2051	04/08/20	03/15/51	31	\$600,000,000	\$600,000,000	(\$10,134,000)	\$0	\$589,866,000	\$98,311	3.388%	\$20,328,000	22
23	4.631%	Subtotal - Buller FMBs			24		\$7,785,000,000	(\$84,860,911)	(\$8,209,863)	\$7,691,929,226		4.728%	\$368,078,050	23
24														24
25	8.530%	Series C due Dec 2021	12/16/91	12/16/21	30	\$15,000,000	\$12,000,000	(\$92,161)	(\$1,643,137)	\$10,264,702	\$85,539	10.066%	\$1,207,920	25
26	8.375%	Series C due Dec 2022	12/31/91	12/31/21	30	\$5,000,000	\$5,000,000	(\$30,740)	(\$547,712)	\$3,421,567	\$85,539	9.889%	\$395,560	26
27	8.260%	Series C due Jan 2021	01/08/92	01/07/22	30	\$5,000,000	\$4,000,000	(\$3,233)	(\$684,641)	\$4,282,117	\$85,542	9.745%	\$487,250	27
28	8.270%	Series C due Jan 2022	01/09/92	01/10/22	30	\$4,000,000	\$4,000,000	(\$30,594)	(\$347,712)	\$3,421,693	\$85,542	9.768%	\$390,720	28
29	2.975%	Subtotal - Series C MTNs			11		\$25,000,000	(\$186,718)	(\$3,423,203)	\$21,390,079		9.926%	\$2,481,450	29
30														30
31	8.050%	Series E due Sep 2022	09/18/92	09/01/22	30	\$15,000,000	\$15,000,000	(\$131,471)	(\$1,695,566)	\$13,172,963	\$87,820	9.257%	\$1,388,550	31
32	8.070%	Series E due Sep 2022	09/09/92	09/09/22	30	\$8,000,000	\$8,000,000	(\$70,118)	(\$904,302)	\$7,025,580	\$87,820	9.280%	\$742,400	32
33	8.110%	Series E due Sep 2022	09/11/92	09/09/22	30	\$12,000,000	\$12,000,000	(\$105,177)	(\$1,356,453)	\$10,538,370	\$87,820	9.325%	\$1,119,000	33
34	8.120%	Series E due Sep 2022	09/11/92	09/09/22	30	\$50,000,000	\$50,000,000	(\$438,238)	(\$5,651,887)	\$43,909,875	\$87,820	9.336%	\$4,668,000	34
35	8.050%	Series E due Sep 2022	09/14/92	09/14/22	30	\$10,000,000	\$10,000,000	(\$87,648)	(\$1,130,377)	\$8,781,975	\$87,820	9.258%	\$925,800	35
36	8.080%	Series E due Oct 2022	10/15/92	10/14/22	30	\$25,000,000	\$25,000,000	(\$200,190)	(\$2,061,627)	\$22,738,182	\$90,953	8.953%	\$2,238,250	36
37	8.080%	Series E due Oct 2022	10/15/92	10/14/22	30	\$26,000,000	\$26,000,000	(\$208,198)	(\$2,938,981)	\$22,852,821	\$87,895	9.283%	\$2,413,580	37
38	8.230%	Series E due Jan 2023	01/29/93	01/20/23	30	\$4,000,000	\$4,000,000	\$51,229	(\$88,989)	\$3,962,241	\$99,056	8.316%	\$332,640	38
39	8.230%	Series E due Jan 2023	01/20/93	01/20/23	30	\$5,000,000	\$5,000,000	(\$37,914)	(\$335,843)	\$4,626,243	\$92,525	8.951%	\$447,550	39
40	8.099%	Subtotal - Series E MTNs			30		\$155,000,000	(\$1,227,725)	(\$16,164,025)	\$137,608,250		9.210%	\$14,275,770	40
41														41
42	7.260%	Series F due Jul 2023	07/22/93	07/21/23	30	\$11,000,000	\$11,000,000	(\$100,622)	(\$89,062)	\$10,310,316	\$93,730	7.804%	\$858,440	42
43	7.260%	Series F due Jul 2023	07/22/93	07/21/23	30	\$27,000,000	\$27,000,000	(\$246,981)	(\$1,445,880)	\$25,310,139	\$93,730	7.804%	\$2,107,000	43
44	7.230%	Series F due Aug 2023	08/16/93	08/16/23	30	\$15,000,000	\$15,000,000	(\$137,211)	(\$268,624)	\$14,594,165	\$97,294	7.457%	\$1,118,550	44
45	7.240%	Series F due Aug 2023	08/16/93	08/16/23	30	\$30,000,000	\$30,000,000	(\$274,423)	(\$337,248)	\$29,188,329	\$97,294	7.467%	\$2,240,100	45
46	6.750%	Series F due Sep 2023	09/14/93	09/14/23	30	\$2,000,000	\$2,000,000	(\$15,300)	\$0	\$1,984,700	\$99,235	6.810%	\$136,200	46
47	6.720%	Series F due Sep 2023	09/14/93	09/14/23	30	\$2,000,000	\$2,000,000	(\$15,300)	\$0	\$1,984,700	\$99,235	6.780%	\$135,600	47
48	6.750%	Series F due Sep 2023	09/14/93	09/14/23	30	\$5,000,000	\$5,000,000	(\$38,250)	(\$34,169)	\$4,927,581	\$98,552	6.865%	\$343,250	48
49	6.750%	Series F due Oct 2023	10/26/93	10/26/23	30	\$12,000,000	\$12,000,000	(\$91,396)	\$0	\$11,908,604	\$99,238	6.810%	\$817,200	49
50	6.750%	Series F due Oct 2023	10/26/93	10/26/23	30	\$16,000,000	\$16,000,000	(\$121,861)	\$0	\$15,878,139	\$99,238	6.810%	\$1,089,600	50
51	6.750%	Series F due Oct 2023	10/26/93	10/26/23	30	\$20,000,000	\$20,000,000	(\$152,326)	\$0	\$19,847,674	\$99,238	6.810%	\$1,362,000	51
52	7.044%	Subtotal - Series F MTNs			30		\$140,000,000	(\$1,193,670)	(\$2,874,983)	\$135,931,347		7.291%	\$10,208,020	52

Rocky Mountain Power
Docket No. 20-035-04
Witness: Ann E. Bulkley

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF UTAH

ROCKY MOUNTAIN POWER

Rebuttal Testimony of Ann E. Bulkley

September 2020

1 I. INTRODUCTION

2 Q. Please state your name and business address.

3 A. My name is Ann E. Bulkley. My business address is 293 Boston Post Road West, Suite
4 500, Marlborough, Massachusetts 01752.

5 Q. Are you the same Ann E. Bulkley who previously submitted direct testimony in
6 this proceeding on behalf of PacifiCorp d/b/a Rocky Mountain Power Company?

7 A. Yes. I am submitting this rebuttal testimony before the Public Service Commission of
8 Utah (“Commission”) on behalf of PacifiCorp d/b/a Rocky Mountain Power Company
9 (“RMP” or the “Company”), which is an indirect wholly owned subsidiary of Berkshire
10 Hathaway Energy (“BHE”).

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

12 A. The purpose of my rebuttal testimony is to respond to the Direct Testimonies of Casey
13 J. Coleman on behalf of the Division of Public Utilities (“Division”), Dr. J. Randall
14 Woolridge on behalf of the Office of Consumer Services (“OCS”), and Steve W. Chriss
15 on behalf of Walmart, Inc. (“Walmart”), as those testimonies relate to the just and
16 reasonable return on equity (“ROE”) and the appropriate capital structure for RMP in
17 Utah.

18 Q. Have you prepared any rebuttal exhibits?

19 A. Yes, I am sponsoring Exhibit RMP___(AEB-1R) through Exhibit RMP___(AEB-
20 11R), which have been prepared by me or under my direction.

21 Q. How is the remainder of your rebuttal testimony organized?

22 A. The remainder of my rebuttal testimony is organized as follows:

- 23 • In Section II, I provide a summary and overview of my rebuttal testimony and
24 the important factors to be considered in establishing the ROE for RMP.
- 25 • In Section III, I provide an overview of the other ROE witnesses’
26 recommendations in this proceeding and a comparison to the comparable
27 returns for integrated electric utilities nationwide.
- 28 • In Section IV, I update the ROE analysis from my direct testimony using market
29 data as of July 31, 2020.
- 30 • In Section V, I discuss capital market conditions and the implications for the
31 models used to estimate the cost of equity for RMP.
- 32 • In Section VI, I respond to Division witness Mr. Coleman’s testimony
33 regarding the ROE and capital structure for RMP.
- 34 • In Section VII, I respond to OCS witness Dr. Woolridge’s return on equity and
35 capital structure recommendations.
- 36 • In Section VIII, I respond to Walmart witness Mr. Chriss’ recommendation.
- 37 • Finally, in Section IX, I summarize my conclusions and recommendations.

38 II. SUMMARY AND OVERVIEW

39 **Q. What are your key conclusions and recommendations regarding the appropriate**
40 **ROE and capital structure for RMP?**

41 **A.** My key conclusions and recommendations are as follows:

- 42 1) Capital market conditions have changed dramatically in 2020. Government
43 bond yields have decreased substantially since February 2020 due to actions
44 of the Federal Reserve and the U.S. Congress to provide unprecedented
45 support for the U.S. economy during the COVID-19 pandemic. However,

46 these lower yields on U.S. Treasury bonds are not the sole determining
47 factor in setting the authorized ROE for RMP in this proceeding. Other
48 market indicators suggest that the cost of equity has risen. These include:
49 heightened volatility in equity and bond markets, and significantly higher
50 beta coefficients (the measure of risk in the CAPM) from both Bloomberg
51 and Value Line.

52 2) The Capital Asset Pricing Model (CAPM) and Empirical CAPM (ECAPM)
53 are producing higher return estimates based on market data as of July 31,
54 2020, than at the time the analysis in my direct testimony was conducted
55 (based on market data as of March 31, 2020), while the Discounted Cash
56 Flow (DCF) model results have increased at the mean high end and
57 remained steady at the mean and mean low as compared to March 2020.
58 These higher CAPM results are consistent with other market indicators
59 suggesting that the cost of equity has increased in recent months as the
60 COVID-19 pandemic has flowed through the market data.

61 3) An authorized ROE of 9.25 percent (as recommended by Division witness
62 Coleman) or 9.00 percent (as recommended by OCS witness Woolridge)
63 would place the return for RMP in the bottom quartile of authorized returns
64 for vertically-integrated electric utility companies in the U.S. This is not
65 reasonable, especially given the evidence regarding RMP's business and
66 financial risks in Utah. RMP has above average risk relative to the proxy
67 group companies, as discussed in my direct testimony, and investors should
68 be compensated for that risk through a higher than average return.

- 69 4) While Mr. Coleman and Dr. Woolridge recognize that market conditions
70 have affected the assumptions used in the ROE estimation models, they
71 have not accurately reflected how these conditions have affected the DCF
72 and CAPM methods. By relying too heavily on the DCF model results, and
73 by failing to use forward-looking assumptions in the CAPM, the other
74 witnesses fail to account for current market conditions and understate the
75 forward-looking cost of equity.
- 76 5) Specifically, while Dr. Woolridge acknowledges the “weeks of chaos” that
77 resulted from the pandemic and recognizes that utility stocks have not
78 performed as safe haven investments, as has traditionally been the case in
79 volatile economic times, his recommended ROE remains essentially
80 unchanged from pre-pandemic levels for companies of similar risk.
- 81 6) Mr. Coleman’s and Dr. Woolridge’s CAPM analyses should also be
82 considered with caution due to: (a) Mr. Coleman’s use of a mean Beta
83 coefficient for his proxy group companies, which triple counts the
84 methodology used by Yahoo! Finance, Zacks Investment Research and Ned
85 Davis Research to calculate Beta, and therefore results in substantially
86 lower Beta coefficients than the current Beta coefficients for electric utility
87 companies from Value Line; (b) Mr. Coleman’s reliance on Value Line
88 Betas from prior to the COVID-19 pandemic since utility Betas have
89 increased substantially due to the economic effects of COVID-19; and (c)
90 Mr. Coleman’s and Dr. Woolridge’s reliance on unreasonably low market
91 risk premiums, which do not reflect the inverse relationship between

92 interest rates and the market risk premium. These assumptions bias the
93 results of Mr. Coleman's and Dr. Woolridge's CAPM results downwards,
94 thereby producing results which are well below the authorized ROE for any
95 U.S. electric utility in the past 40 years.¹

96 7) Utility commissions across the nation are looking beyond the results of the
97 traditional ROE estimation models to establish returns that are reasonable
98 under current market conditions.

99 a) Even though the ROE estimation models are producing return
100 estimates between 5.06 percent and 7.60 percent, utility regulators
101 recognize that such low returns are not compensatory for investors.
102 The first and third quartiles of authorized ROEs for integrated
103 electric utility companies since 2018 have been within a range from
104 9.48 percent to 9.99 percent, which suggests that regulators are
105 relying on more than just the results of the traditional models. As
106 shown in Figure 2 of my rebuttal testimony, the majority of
107 authorized ROEs for integrated electric utilities since 2018 have
108 been within the range of results established in my direct testimony.

109 8) The investor required return is not established with respect to any individual
110 model. Rather than endorsing the results of a specific methodology, the
111 Commission should consider how current market conditions affect the risks
112 for equity investors as well as the results of a broader range of ROE
113 estimation methodologies. Finally, the Commission's adherence to the

¹ Source: Regulatory Research Associates.

114 *Hope* and *Bluefield* decisions suggests that the methodology is not what is
115 to be determined, but rather a “just and reasonable” return that is
116 comparable to the return available on investments of similar risk.

117 9) The other ROE witnesses’ recommendations fail to consider the overall risk
118 related to the Tax Cuts and Jobs Act (“TCJA”) for utilities in general and
119 how their recommended ROE and capital structure could affect the financial
120 risk of RMP. In regard to the TCJA, it is important that the Commission
121 consider that:

122 i. Moody’s Investors Service (Moody’s) has continued to downgrade
123 utilities throughout 2019 and 2020 related to the negative cash flow
124 implications of tax reform.

125 ii. The other ROE witnesses’ recommended ROEs ignore this risk and
126 the potential remedies that have been offered by the rating agencies
127 to mitigate that risk, such as approving higher authorized returns and
128 equity ratios to improve cash flow metrics.

129 **Q. Have you updated your ROE analyses in rebuttal?**

130 A. Yes. As discussed in Section IV of my rebuttal testimony, I have updated my analytical
131 results based on market data as of July 31, 2020. The updated DCF results are similar
132 to those in my direct testimony, while the updated CAPM results have increased.
133 Although my updated ROE analysis continues to support an authorized ROE of 10.20
134 percent for PacifiCorp in Utah, the Company has decided to lower its requested ROE
135 by 40 basis points to 9.80 percent. In addition, while the analytical results of ROE
136 estimation models provide a starting point, my recommendation continues to

137 appropriately consider the results of multiple methodologies as well as other factors,
138 including company-specific risks, capital market conditions and the capital attraction
139 and comparable return standards. Further, I support RMP's proposed capital structure
140 consisting of 53.67 percent common equity, 46.32 percent long-term debt, and 0.01
141 percent preferred equity as reasonable relative to the operating utility companies held
142 by the proxy group.

143 III. COMPARABLE RETURN STANDARD

144 **Q. Please summarize the ROE recommendations of the other ROE witnesses in this**
145 **proceeding.**

146 A. Figure 1 summarizes the results of the ROE analyses presented by the other witnesses
147 in this proceeding and their final recommendations. Division witness Mr. Coleman
148 recommends an authorized ROE of 9.25 percent for RMP based primarily on the
149 principle of gradualism, while also considering the results of his DCF model, CAPM
150 analysis, Risk Premium analysis and authorized ROEs for electric utilities nationwide,²
151 while OCS witness Dr. Woolridge's primary ROE recommendation of 9.00 percent is
152 based in large part on the results of his DCF analysis while also considering the results
153 of his CAPM analysis and authorized returns for electric utilities across the country.³
154 Walmart witness Mr. Chriss does not perform his own ROE analysis and does not
155 provide a specific recommendation. However, Mr. Chriss does conclude that the
156 authorized ROE for RMP should be no greater than 9.80 percent (i.e., RMP's current

² Direct Testimony of Casey J. Coleman, at 67.

³ Dr. Woolridge also provides an alternative ROE recommendation of 8.75 percent if the Commission adopts RMP's proposed capital structure.

157 authorized ROE), which he notes “is generally consistent with recent Commission
158 decisions and national trends.”⁴

159 **Figure 1: Summary of Other ROE Witnesses’ Model Results⁵**

	Mr. Coleman (DPU)	Dr. Woolridge (OCS)
Constant Growth DCF	8.91% - 9.17%	8.70% – 8.95%
CAPM	5.06% - 5.90%	7.60%
Risk Premium	9.06%	N/A
Recommendation	9.25%	9.00%

160 **Q. Do the other witnesses in this proceeding discuss the current market conditions?**

161 A. Yes. OCS witness Dr. Woolridge disputes my conclusion regarding the effect of market
162 conditions on the ROE estimation models, asserting that the DCF model is producing
163 reliable estimates of the current market cost of equity for utility companies.⁶ Similarly,
164 while Mr. Coleman does not specifically discuss current market conditions, he
165 concludes that current market conditions support a cost of equity for RMP in the range
166 of 7.24 percent to 9.17 percent which is based on the results of his DCF, CAPM and
167 Risk Premium analyses.⁷ Mr. Coleman has not considered how current market
168 conditions are affecting the models. Despite their views, Dr. Woolridge and Mr.
169 Coleman both rely on a normalized risk-free rate in his CAPM analysis to compensate
170 for the current low interest rate environment. In addition, Dr. Woolridge and Mr.
171 Coleman ultimately recognize that models can produce results that are too low as both
172 witnesses do not rely on the results of their CAPM analysis, essentially acknowledging
173 that these results do not meet the fair return standards of *Hope* and *Bluefield*. Therefore,

⁴ Direct Testimony of Steve W. Chriss, at 9-10.

⁵ Wal-Mart witness Chriss did not perform his own ROE analysis and did not provide specific ROE recommendations. Therefore, Mr. Chriss is not included in this summary table.

⁶ Direct Testimony of Dr. J. Randall Woolridge, at 76.

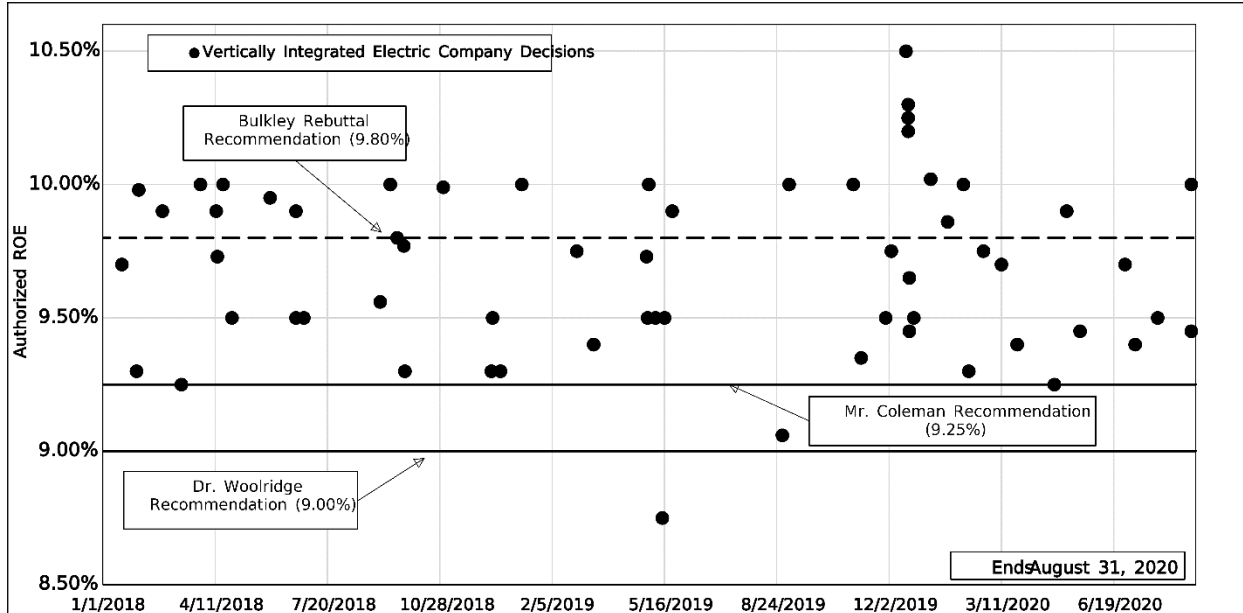
⁷ Direct Testimony of Casey J. Coleman, at 67.

174 while Dr. Woolridge and Mr. Coleman suggest that market conditions have not affected
175 the model results, in the development of their analyses and their review of the results
176 of his models, both recognize that there are model results that are so low that they
177 cannot be relied upon.

178 **Q. Are authorized returns in other jurisdictions a relevant benchmark that investors**
179 **consider?**

180 A. Yes. The regulatory decisions of other Commissions provide a basic test of
181 reasonableness and a benchmark that investors consider in assessing the authorized
182 ROE against the returns available from other regulated utilities with comparable risk.
183 Division witness Coleman, OCS witness Woolridge and Walmart witness Chriss all
184 present evidence regarding authorized returns for electric utilities in other jurisdictions,
185 suggesting that these returns are relevant for purposes of establishing the authorized
186 ROE for RMP in this proceeding.

187 Figure 2 shows the distribution of authorized returns for integrated electric utilities
188 from January 2018 through August 2020. The range of authorized ROEs has been from
189 8.75 percent to 10.50 percent over this period, with an average authorized ROE of 9.69
190 percent and a median of 9.73 percent.

Figure 2: Authorized ROEs 2018-Present⁸

192 As shown in Figure 2, the large majority of authorized returns for integrated electric
 193 utilities (47 out of 63 decisions) from 2018 through August 2020 have been between
 194 9.50 percent and 10.50 percent. The other ROE witnesses in this proceeding have
 195 recommended a range of 9.00 percent to 9.25 percent, which is well below the majority
 196 of authorized ROEs over this period. The Company’s requested ROE of 9.80 percent
 197 is generally consistent with the range established by recently authorized ROEs for
 198 integrated electric utilities nationwide.

199 **Q. Mr. Coleman and Dr. Woolridge both claim that their ROE recommendation**
 200 **recognizes the concept of “gradualism.”⁹ Please comment.**

201 **A.** While Mr. Coleman and Dr. Woolridge both indicate their ROE recommendations
 202 reflect gradualism, their recommendations are 55 and 80 basis points, respectively,
 203 below RMP’s currently authorized ROE 9.80 percent. Furthermore, credit rating

⁸ Source: Regulatory Research Associates.

⁹ Direct Testimony of Casey J. Coleman, at 52-54, and Direct testimony of Dr. J. Randall Woolridge, at 4.

204 agencies take the authorized ROE into consideration when assessing the overall credit
205 risk of a company. As discussed in my direct testimony, Moody's recently downgraded
206 the credit rating of ALLETE, Inc. based on their recent rate case decision, which
207 included a below average authorized ROE of 9.25 percent, while FitchRatings recently
208 downgraded CenterPoint Energy Houston Electric's Long-Term Issuer Default rating
209 following the approval of an unfavorable rate case outcome in Texas.¹⁰ Moreover, as
210 will be discussed in more detail below, RRA recently downgraded the regulatory
211 ranking of Utah based in part on the recent rate case decision for DEU, which RRA
212 noted included a below average authorized ROE of 9.50 percent. Mr. Coleman's
213 recommendation is equivalent to the authorized ROE for ALLETE, Inc. and below the
214 recently authorized ROE for DEU, while Dr. Woolridge's recommendation of 9.00
215 percent is below both the recently authorized ROE for ALLETE, Inc. and DEU.
216 Therefore, the recommendations of Dr. Woolridge and Mr. Coleman clearly do not
217 reflect the principal of gradualism and would likely be view negatively by the credit
218 rating agencies.

219 **Q. What factors should be considered in evaluating the results of ROE models and**
220 **establishing the authorized ROE?**

221 A. The primary factors that should be considered are: (i) the importance of investors'
222 actual return requirements and the critical role of judgment in selecting the appropriate
223 ROE; (ii) the importance of providing a return that is comparable to returns on
224 alternative investments with commensurate risk; (iii) the need for a return that supports

¹⁰ Direct Testimony of Ann. E. Bulkley, at 70-71.

225 a utility's ability to attract needed capital at reasonable terms; and (iv) the effect of
226 current and expected capital market conditions.

227 **Q. What factors support RMP's requested ROE in this case?**

228 A. Based on my updated analyses, I conclude that the Company's requested ROE of 9.80
229 percent is reasonable, if not conservative, given the updated range of results. A return
230 at this level is:

- 231 1. Supported by the analyses contained in my direct testimony and updated in my
232 rebuttal testimony;
- 233 2. Consistent with current and prospective financial market conditions;
- 234 3. Supported by the methodologies considered by the Commission as well as other
235 regulatory jurisdictions;
- 236 4. Consistent with the range of ROE awards for integrated electric utilities in other
237 state jurisdictions;
- 238 5. Considers the unique business and operating risks of RMP in Utah; and
- 239 6. Will support RMP's ability to attract capital to finance investments at
240 reasonable rates, which will provide long-term benefits to ratepayers by
241 limiting the long-term cost of capital.

242 **IV. UPDATED ROE ANALYSES**

243 **Q. Have you updated your ROE analyses?**

244 A. Yes. As shown in Exhibits RMP__(AEB-1R) through RMP__(AEB-5R), I have
245 updated my ROE analyses using market data as of July 31, 2020. All of the
246 methodologies in my updated analysis have been developed in a manner that is
247 consistent with the approach taken in my direct testimony. I have continued to exclude

248 results below 7.0 percent because such returns do not provide a sufficient risk premium
249 above the long-term debt cost to compensate equity investors for the risks associated
250 with ownership. Figure 3 summarizes the results of my updated analyses.

251 As shown in Figure 3, and Exhibit RMP____(AEB-2R), the Constant Growth
252 DCF model results range from 8.54 percent to 9.89 percent.¹¹ Dividend yields remain
253 below historical average levels for the proxy group, suggesting that the results of the
254 DCF model may still understate the investor-required return on equity. The CAPM
255 results shown in RMP____(AEB-3R) range from 11.69 percent to 12.42 percent and
256 the Empirical CAPM (ECAPM) results are 12.26 percent to 12.80 percent.¹² Increases
257 in the CAPM and ECAPM model results are primarily due to significantly higher Beta
258 coefficients reported by both Bloomberg and Value Line, as the correlation between
259 utility returns and returns for the broader market has increased substantially. The higher
260 Betas more than offset the decline in government bond yields. Exhibit RMP____(AEB-
261 4R) demonstrates that the results from the Risk Premium analysis range from 9.26
262 percent to 9.96 percent, depending on the Treasury bond yield. Finally, the mean and

¹¹ Based on mean results of the 30-day average stock price scenario.

¹² Based on near-term projected Treasury bond yields, using average results for both Value Line and Bloomberg betas.

263 median results of the Expected Earnings approach are 10.70 percent and 10.73 percent
 264 respectively, as shown in Exhibit RMP___(AEB-5R).

265 **Figure 3: Updated Analytical Results¹³**

<i>Constant Growth DCF</i>			
	Mean Low	Mean	Mean High
30-Day Average	8.54%	9.00%	9.89%
90-Day Average	8.54%	8.98%	9.86%
180-Day Average	8.43%	8.76%	9.54%
<i>Capital Asset Pricing Model</i>			
	Current Risk-Free Rate (1.34%)	Q4 2020 – Q4 2021 Projected Risk-Free Rate (1.70%)	2022-2026 Projected Risk-Free Rate (3.00%)
Value Line Beta	12.37%	12.42%	12.58%
Bloomberg Beta	11.63%	11.69%	11.93%
<i>Empirical Capital Asset Pricing Model</i>			
Value Line Beta	12.76%	12.80%	12.92%
Bloomberg Beta	12.21%	12.26%	12.44%
<i>Treasury Yield Plus Risk Premium</i>			
	Current Risk-Free Rate (1.34%)	Q4 2020 – Q4 2021 Projected Risk-Free Rate (1.70%)	2022-2026 Projected Risk-Free Rate (3.00%)
Risk Premium Analysis	9.26%	9.41%	9.96%
<i>Expected Earnings Analysis</i>			
	Mean		Median
Expected Earnings Result	10.70%		10.73%

¹³ The analytical results included in the table reflect the results of the Constant Growth analysis excluding the results for individual companies that did not meet the minimum threshold of 7 percent.

266 **V. CAPITAL MARKET CONDITIONS AND THE IMPLICATIONS FOR THE COST**
267 **OF EQUITY**

268 **Q. Mr. Coleman suggests that the low interest rate environment supports a reduction**
269 **in the authorized ROE for RMP.¹⁴ Do you agree?**

270 A. No, I do not agree. Government bond yields are only one of many factors that equity
271 investors consider in determining their return requirements. It is important to view
272 current Treasury bond yields in the context of conditions in the economy and capital
273 markets. It would not be reasonable for the Commission to consider only the decline in
274 30-year Treasury bond yields, without also considering the recent market conditions
275 that have contributed to that decline. Further, there are reasons to believe that the recent
276 declines in Treasury bond yields are not representative of the longer-term trend in
277 government and corporate bond yields. Rather, those lower interest rates are directly
278 attributable to the COVID-19 pandemic. The economic effects of the measures used to
279 contain COVID-19 have caused the Federal Reserve to reduce the federal funds rates
280 and take additional measures to support the U.S. economy and provide liquidity and
281 stability in financial markets. These are short-term events that have little to do with the
282 longer-term trend in bond yields or equity costs.

283 **Q. What is your response to Mr. Coleman's assertion that for RMP's authorized**
284 **ROE to increase from the last case either market conditions would have had to**
285 **change significantly or RMP's risks would have needed to increase?¹⁵**

286 A. While the Company has decided to lower its ROE request to 9.80 percent, which is
287 equivalent to the ROE authorized in the Company's last rate case, it is still important

¹⁴ See, for example, Direct Testimony of Casey J. Coleman, at 8 and 64.

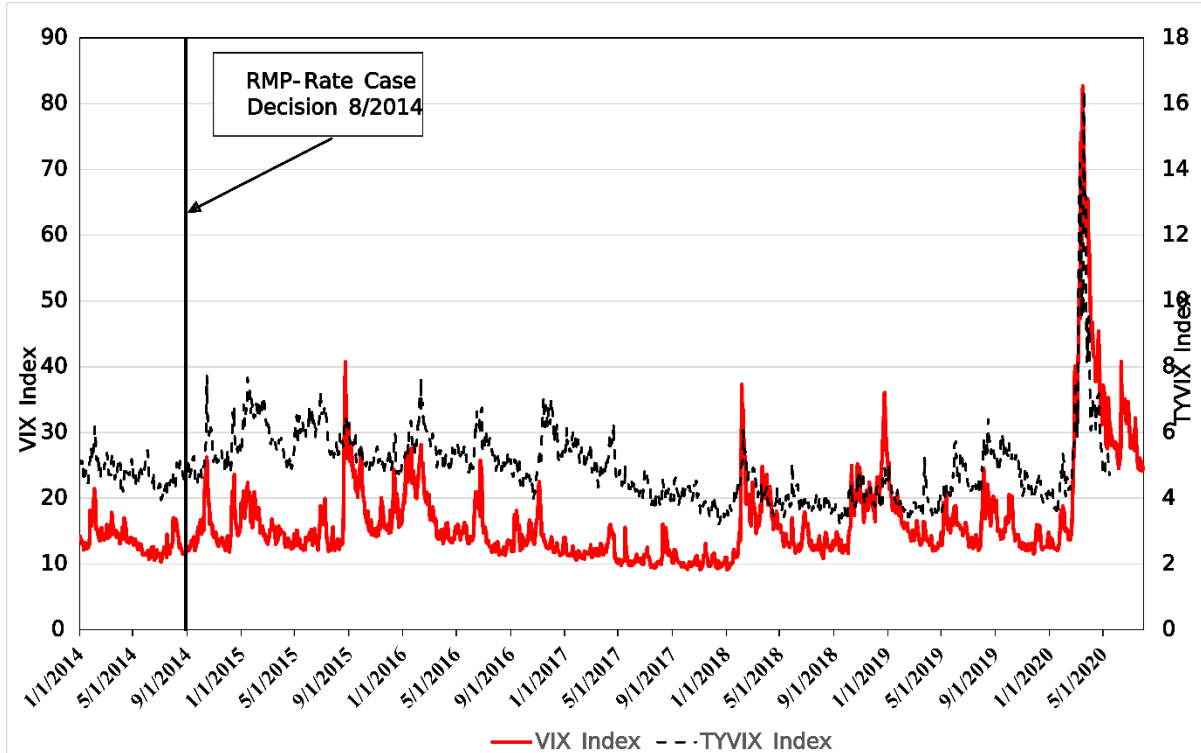
¹⁵ Direct Testimony of Casey J. Coleman, at 11.

288 to consider the recent developments in capital markets and how current market
289 conditions compare to those that existed when RMP's current ROE was authorized in
290 2014. As discussed in my direct testimony, capital market conditions have been
291 extremely volatile in 2020.¹⁶ This is due to the economic effects of the COVID-19
292 pandemic, as the measures used to contain the COVID-19 pandemic have forced the
293 U.S. economy into a recession. As a result, volatility has increased to levels not seen
294 since the Great Recession of 2008/09. For example, I have updated Figure 3 from my
295 Direct Testimony, which contained two separate measures of volatility, the Chicago
296 Board Options Exchange ("CBOE") Volatility Index ("VIX") and the U.S. Treasury
297 Note Volatility Index ("TYVIX"). As shown in Figure 4, the VIX has remained well
298 above its long-term average in the months following the filing of my direct testimony
299 in May. Furthermore, the VIX as of July 31, 2020 is much greater than it was at the
300 time of the Commission's decision in RMP's last rate case. In addition, as of the
301 beginning of September 2020, the VIX once again increased above 30.00 providing
302 further support for the fact that financial markets continue to face increased uncertainty.
303 While Mr. Coleman has failed to consider market volatility, Dr. Woolridge has
304 acknowledged the "weeks of chaos" and further recognized that "day-to-day volatility
305 in financial markets has been at extremes," with the VIX increasing to levels not seen
306 since the Great Recession of 2008/09.¹⁷

¹⁶ Direct Testimony of Ann E. Bulkley, at 14-20.

¹⁷ Direct Testimony of Dr. J. Randall Woolridge, at 13.

Figure 4: CBOE VIX and TYVIX – January 2003 – July 2020¹⁸



308 **Q. Has market volatility declined since the filing of your direct testimony?**

309 A. Yes, however, as shown in Figure 4, while the VIX has declined since the filing of my
 310 direct testimony, this measure of volatility remains above levels in January and the first
 311 half of February prior to COVID-19 and well above the historical median of 16.12 since
 312 2003. It is important to view the declines in the VIX in the context of the unprecedented
 313 response by the Federal Reserve and Congress. As discussed in more detail below, the
 314 Federal Reserve's corporate bond buying programs are providing liquidity to bond
 315 markets and therefore reducing some of the uncertainty that was driving the volatility
 316 seen in March. However, there is still much uncertainty regarding the near-term effect

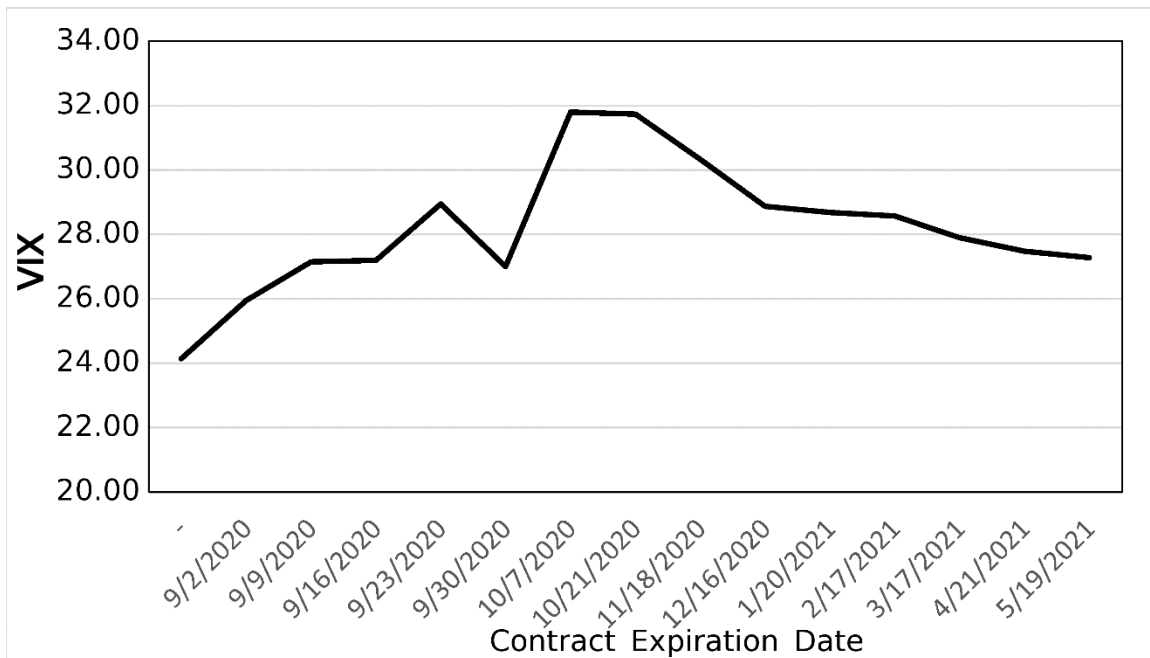
¹⁸ Source: Bloomberg Professional.

317 of COVID-19 on the economy and the financial markets, which is why the VIX is still
318 above its long-term historical level.

319 **Q. What are investors' expectations regarding the VIX over the near-term?**

320 A. To determine the expectations of investors for the VIX, I reviewed the VIX futures
321 published by the CBOE. The VIX futures reflect investors' views regarding the value
322 of the VIX for different expiration dates in the future. As shown in Figure 5, investors
323 expect the VIX to remain at levels that exceed 25.00 at least through May of 2021.
324 Therefore, investors expect increased volatility and uncertainty to continue to persist
325 over the near-term as the economy recovers from the economic effects of the COVID-
326 19 pandemic.

327 **Figure 5: CBOE VIX Futures as of August 28, 2020**



328 **Q. What steps have the Federal Reserve and the U.S. Congress taken to stabilize**
329 **financial markets and support the economy?**

330 A. As discussed in my direct testimony, the Federal Reserve, in response to the economic
331 effects of COVID-19, decreased the Federal Funds rate twice in March 2020, resulting
332 in a target range of 0.00 percent to 0.25 percent and also announced plans to increase
333 its holdings of both Treasury and mortgaged-back securities.¹⁹ In addition to the
334 policies discussed in my direct testimony, on March 23, 2020, the Federal Reserve
335 began expansive programs to support credit to large employers; the Primary Market
336 Corporate Credit Facility (PMCCF) to provide liquidity for new issuances of corporate
337 bonds, and the Secondary Market Corporate Credit Facility (SMCCF) to provide
338 liquidity for outstanding corporate debt issuances. Further, the Federal Reserve
339 supported the flow of credit to consumers and businesses through the Term Asset-
340 Backed Securities Loan Facility (TALF).²⁰

341 In addition to the Federal Reserve's response, the U.S. Congress has also passed fiscal
342 stimulus programs that both Mr. Coleman and Dr. Woolridge fail to mention in their
343 testimony. On March 27, 2020, the Coronavirus Aid, Relief, and Economic Security
344 (CARES) Act was signed into law, which is a large fiscal stimulus package aimed at
345 also mitigating the economic effects of the coronavirus. While these expansive
346 monetary and fiscal programs have provided for greater price stability, as shown in
347 Figure 4 and Figure 5 above, the VIX remains well above long-term historical levels
348 and is expected to remain above long-term historical levels over the near-term.

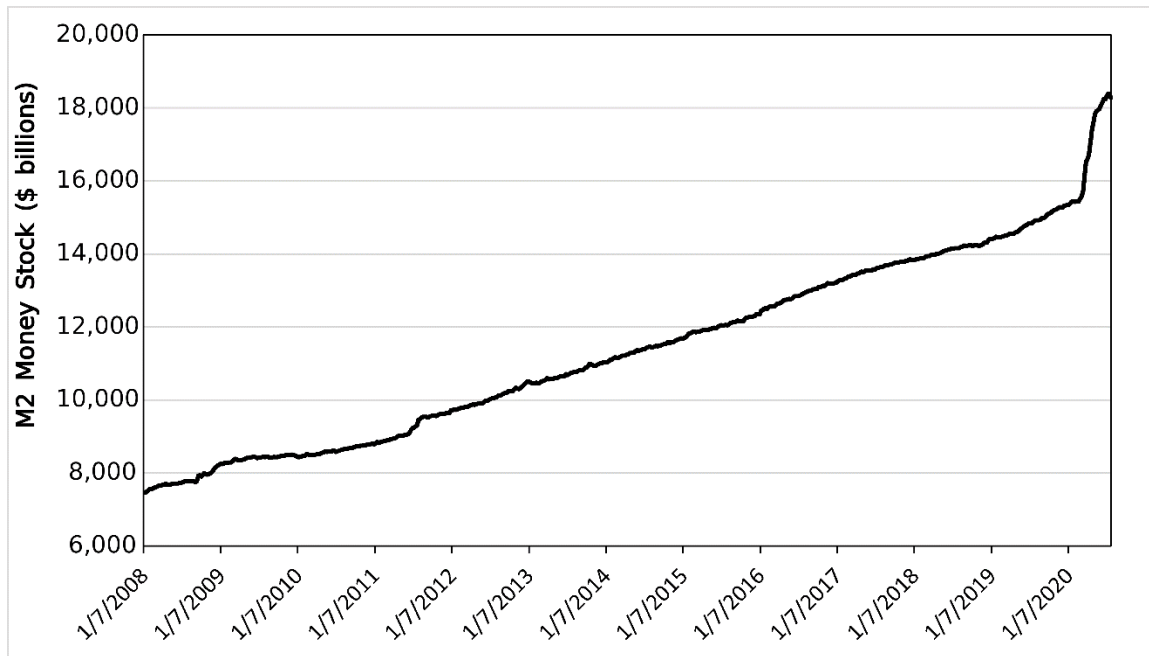
¹⁹ Direct Testimony of Ann E. Bulkley, at 20-21.

²⁰ Federal Reserve Board Press Release, "Federal Reserve announces extensive new measures to support the economy", March 23, 2020.

349 **Q. How do the Federal Reserve’s recently announced programs affect the economy**
350 **and financial markets?**

351 A. These programs allow the Federal Reserve to purchase government bonds and
352 corporate bonds from banks. The banks then receive cash from the Federal Reserve,
353 which results in an expansion of the money supply. This increase in the money supply
354 keeps interest rates low and increases the ability of banks to lend to consumers and
355 businesses. Continued access to capital is particularly important in current market
356 conditions because it allows companies to offset the negative effect of COVID-19 on
357 business operations. As shown in Figure 6 below, the programs enacted by the Federal
358 Reserve have resulted in an unprecedented expansion of the money supply as measured
359 by M2²¹ in recent months, and that expansion has been much greater than the increase
360 seen following the Federal Reserve’s response to the Great Recession of 2008/2009.
361 This response from the Federal Reserve again demonstrates the level of intervention
362 that has been necessary to attempt to stabilize the markets over this period, suggesting
363 greater market risk at this time than in 2014 when RMP’s currently-authorized ROE
364 was approved, counter to Mr. Coleman’s conclusion.

²¹ M2 is defined by the Federal Reserve as follows: M2 includes a broader set of financial assets held principally by households. M2 consists of M1 plus: (1) savings deposits (which include money market deposit accounts, or MMDAs); (2) small-denomination time deposits (time deposits in amounts of less than \$100,000); and (3) balances in retail money market mutual funds (MMMFs).

Figure 6: M2 Money Stock – January 2008 – July 2020²²

366

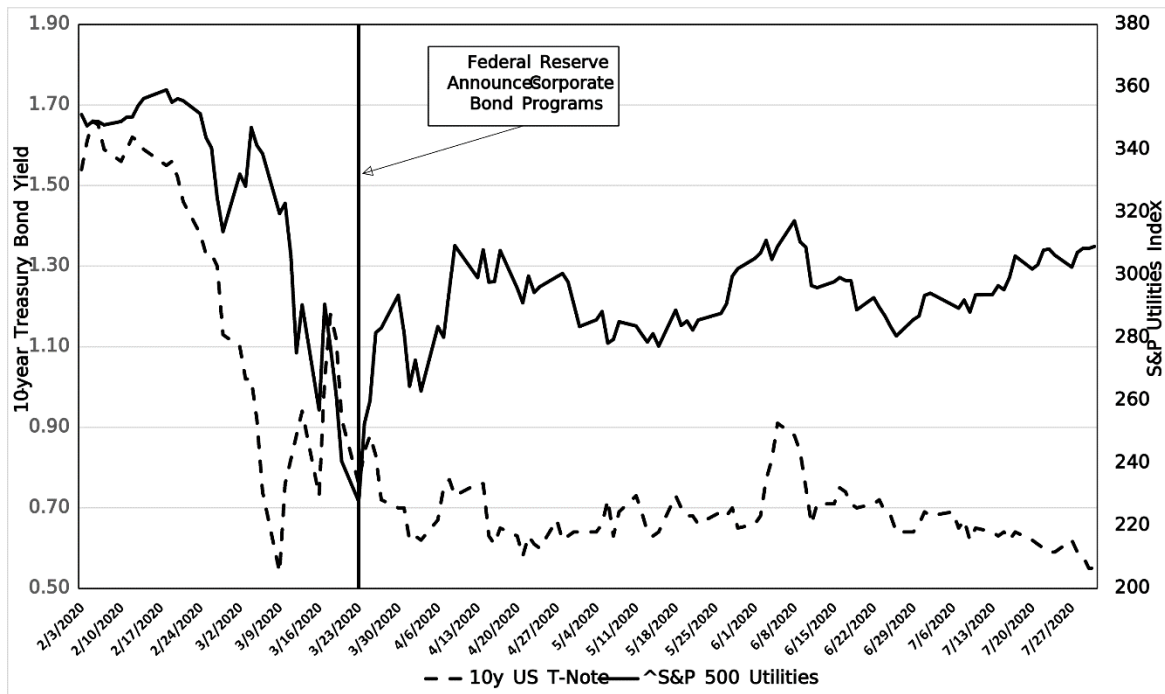
367 **Q. Have Mr. Coleman and Dr. Woolridge considered how the market has responded**
 368 **to the unprecedented intervention by the Federal Reserve?**

369 A. No. As discussed above, the Federal Reserve's expansive programs greatly increased
 370 the money supply, which resulted in lower borrowing costs for corporate firms and thus
 371 continued access to the capital needed to offset the economic effects of COVID-19. As
 372 a result, interest rates have remained low, and stability has been restored in the
 373 corporate bond market. For investors, this led to allocating more funds to equities. As
 374 shown in Figure 7, while the yield on the 10-year Treasury Bond has remained
 375 relatively stable in the range of 0.58 percent to 0.91 percent between March 23, 2020
 376 and July 31, 2020, the S&P Utilities Index increased dramatically in the days
 377 immediately following the Federal Reserve's announcement on March 23, 2020.

²² Board of Governors of the Federal Reserve System (US), M2 Money Stock [M2], retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/M2>, August 10, 2020.

378 Therefore, the policies of the Federal Reserve, while resulting in stability in the bond
 379 markets, have resulted in inflated equity prices, as investors search for returns given
 380 the current low interest rate environment. Thus, I do not agree with Mr. Coleman and
 381 Dr. Woolridge that current share prices represent a reasonable indicator of the share
 382 prices that will exist over the near-term.

383 **Figure 7: 10-year U.S. Treasury Yield and S&P Utilities Index**



384
 385 **Q. Have rating agencies commented on the recent decline in bond yields and the**
 386 **anticipated effect on the authorized ROEs for utilities?**

387 **A.** Yes. In April 2020, Moody’s noted that it expects regulators to be hesitant to reduce
 388 authorized ROEs in response to the COVID-19 pandemic-related decline in the yield
 389 on 30-year Treasury Bonds. Specifically, Moody’s commented:

As a result of the economic fallout from the coronavirus outbreak, the rate on the 30-year T-bill has declined significantly, as shown in Exhibit 2. Assuming utilities continue to earn the average 670 bps spread over the 30-year T-bill, this would suggest that there will be a great deal of pressure on authorized returns. **However,**

395 we think regulators will be hesitant to significantly reduce
396 allowed returns given the uncertain market environment and
397 the likely delays in adjudicating rate cases because of social
398 distancing mandates and other issues associated with the
399 coronavirus (see “Regulated Electric, Gas and Water Utilities –
400 US: Coronavirus outbreak delays rate cases, but regulatory
401 support remains intact”). This may lead to the widest spread
402 between the authorized ROE and the 30-year T-bill in at least the
403 past two decades. Utilities with a formula driven approach to
404 setting ROEs may be hurt far more quickly as their ROE’s are
405 adjusted automatically. We expect some of these utilities to appeal
406 to regulators to either suspend or alter this formula based
407 approach, at least temporarily.

408 In contrast to the gradual, long-term decline in the 30-year T-bill
409 illustrated in Exhibit 1, the year-to-date decline in the yield has
410 been more abrupt, influenced by the plunge in economic activity
411 at the end of the first quarter. We expect US GDP to undergo a
412 sharp 4.5% contraction in the first half of the year, before finishing
413 full-year 2020 down 2.0% and recovering in 2021 with 2.3%
414 growth (see “Global Macro Outlook 2020-21 [March 25, 2020
415 Update]: The coronavirus will cause unprecedented shock to the
416 global economy”). Given the continued uncertainty over efforts to
417 contain the coronavirus outbreak, there is significant downside
418 risk to our macroeconomic forecast. But if there were to be a
419 material snapback in growth, we would expect interest rates to
420 follow suit.²³

421 **Q. Are the views outlined by Moody’s consistent with Mr. Coleman’s cite to the**
422 **recent settlement filed in the rate case for PacifiCorp in Washington?**

423 A. Yes. As noted by Mr. Coleman, the parties in the case agreed to an ROE of 9.50 percent,
424 which is equivalent to the ROE that was authorized by the Washington Utilities and
425 Transportation Commission (“WUTC”) in September 2016 in PacifiCorp’s last rate
426 case.²⁴ Therefore, despite the arguments put forth by both Mr. Coleman and Dr.
427 Woolridge that capital costs are declining, the parties in the rate case for PacifiCorp in

²³ Moody’s Investors Service, “Regulated Electric and Gas Utilities – US: Continued decline in ROEs to heighten pressure on financial metrics,” April 17, 2020, at 3 (emphasis added).

²⁴ Direct Testimony of Casey J. Coleman, at 11.

428 Washington did not reduce the authorized ROE. Rather, consistent with the report from
429 Moody's discussed above, as part of an overall settlement that covered many issues,
430 the parties agreed to maintain the authorized ROE awarded in PacifiCorp's last rate
431 case in Washington. While it is common to try to compare one particular element of a
432 rate case outcome to a current case, such a comparison is not often reasonable when
433 reviewing specific elements of a settlement. This is because settlements represent
434 compromise between all of the parties on all issues. Therefore, it is difficult to conclude
435 that any one element of the settlement was acceptable to all or any individual party.
436 Rather, it is more likely that taken together the entirety of the terms resulted in an
437 outcome that could be agreed to by all. However, while this was a settlement, the effect
438 was to hold the ROE consistent with the previously authorized ROE. In the current
439 case, the Company has decided to reduce the proposed ROE to 9.80 percent, which is
440 equivalent to the ROE approved in the last rate case for RMP. In contrast, Mr.
441 Coleman's proposal would reduce the Company's ROE in this jurisdiction by 55 basis
442 points. Moreover, given the uncertain market environment noted by Moody's above, it
443 is very likely that Moody's and other credit rating agencies would view the
444 recommended ROEs of Mr. Coleman and Dr. Woolridge as credit negative.

445 **Q. What are your conclusions regarding the effect of recent market volatility and the**
446 **policies of the Federal Reserve on the cost of equity for RMP?**

447 A. The Commission has found it important to consider how market conditions have
448 changed since a company's last rate case in the determination of the ROE range.²⁵ The
449 risks in the current market environment were not present in the data in RMP's last rate

²⁵ Report and Order, Docket No. 19-057-02, Dominion Energy Utah, February 25, 2020, at 6.

450 case. Given the uncertainty and volatility that has characterized capital markets in 2020,
451 it is reasonable that equity investors would now require a higher return on equity to
452 compensate them for the additional risk associated with owning common stock under
453 these market conditions. Therefore, relying on current market data would likely suggest
454 that the cost of equity has increased since the Commission approved the settlement in
455 RMP's last rate proceeding. As a result, the Company's updated recommendation of
456 9.80 percent, which is equivalent to the authorized ROE in RMP's last rate case, is
457 likely a conservative estimate of the ROE in the current market environment.
458 Furthermore, based on these data, Mr. Coleman's and Dr. Woolridge
459 recommendations to reduce RMP's ROE to reflect current market conditions, are
460 unsupported.

461 **Q. Dr. Woolridge comments on the high market-to-book ratios in the utilities**
462 **sector.²⁶ What is your response?**

463 A. As discussed in my direct testimony, I agree with Dr. Woolridge that the valuations of
464 public utilities have increased well above historical average levels in recent years, as
465 demonstrated by their elevated Price-to-Earnings (P/E) ratios.²⁷ Dr. Woolridge
466 contends that these high valuations, which are reflected in his data on market-to-book
467 ratios, are an indication that authorized returns for utilities are higher than what is
468 required by investors. However, he fails to recognize how these high valuations affect
469 the results of the DCF model.

470 The DCF model generally produces reasonable and reliable estimates of the cost of
471 equity for companies in stable, mature industries, such as regulated utilities; however,

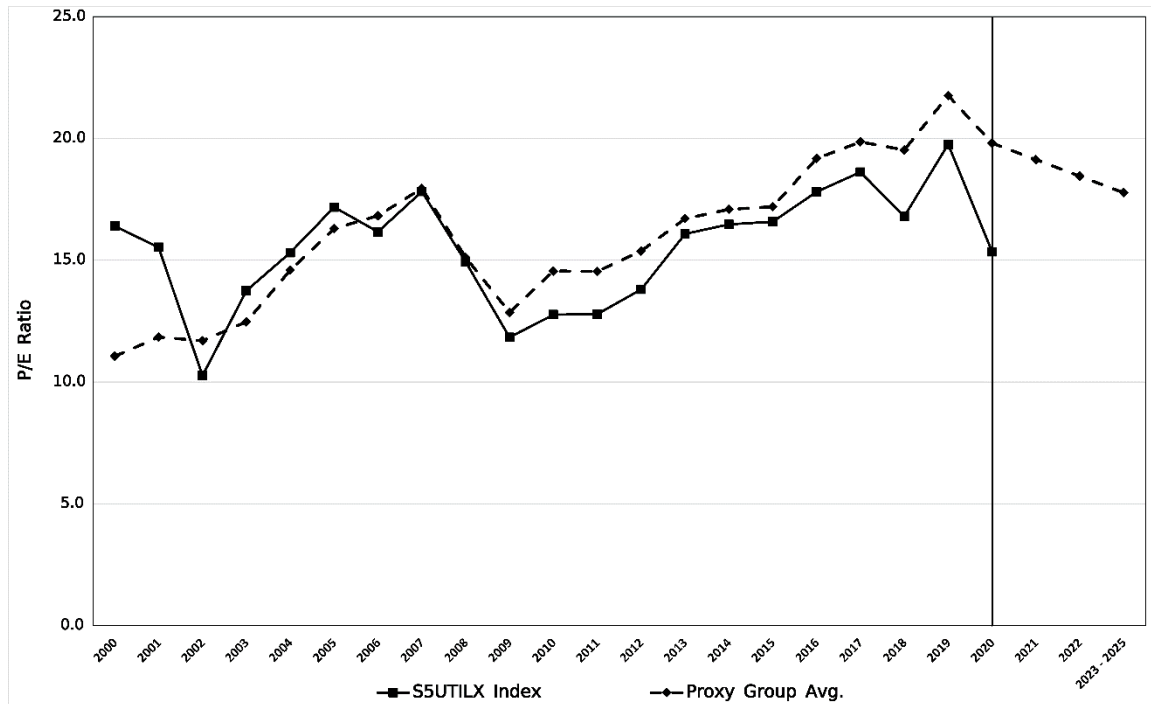
²⁶ Direct Testimony of Dr. J. Randall Woolridge, at 10-11 and Exhibit JRW-4.

²⁷ Direct Testimony of Ann E. Bulkley, at 25-26.

472 the results of the DCF model are being distorted by the high valuations and low
473 dividend yields of utilities. Even though utility share prices have declined in recent
474 weeks, the P/E ratios remain higher than historical average levels over the past decade,
475 while dividend yields remain lower than historical average levels. Equity analysts have
476 commented on the unusually high valuations of utility shares compared to historical
477 levels.

478 **Q. How have recent market conditions affected the valuations of utility shares?**

479 A. As discussed in my direct testimony, the valuations of public utilities are well above
480 historical average levels, as demonstrated by their elevated Price-to-Earnings (“P/E”)
481 ratios. I updated Figure 8 in my direct testimony with more recent market data through
482 July 31, 2020. As shown in Figure 8, while the share prices of utilities declined in 2020,
483 as investors rotated from utilities to Treasury Bonds due to the economic effects of
484 COVID-19, the P/E ratios for my proxy group companies in 2020 are still well above
485 historical average levels over the past decade. However, according to Value Line, those
486 valuations are projected to decline from the current average P/E ratio of 19.81 in 2020
487 to 17.77 in 2023-2025.

Figure 8: Average P/E Ratios for Proxy Group ²⁸

489 **Q. What have equity analysts said about the valuations of utility stocks since you filed**
 490 **your direct testimony?**

491 **A.** Several equity analysts have recognized that utility stock valuations remain very high
 492 relative to historical levels even after the decline in share prices that occurred as a result
 493 of the economic effects of COVID-19. For example, Barron’s recently noted:

494 Charles Fishman, a utility analyst at Morningstar, points out that
 495 “utility valuations in February were at record highs,” and that
 496 “commercial and industrial electricity demand reductions and
 497 delay in investment due to the pandemic” have weighed on these
 498 stocks as well.

499 In May, power demand in the U.S. was down 8% year over year,
 500 according to Morgan Stanley. That follows a 5% drop in April.

501 But even after lackluster performance recently, utility shares still
 502 aren’t cheap. The stocks in the Utilities Select Sector SPDR ETF
 503 trade at about 19 times their current fiscal year profit estimates,

²⁸ Source: Bloomberg Professional. Includes 2020 data through July 31, 2020.

504 according to FactSet. That's above their five-year average of a
505 little below 18 times.²⁹

506 This implies that even after the economic effects of COVID-19 are considered, the
507 ROE calculated using historical market data in the DCF model is still understating the
508 forward-looking cost of equity.

509 **Q. Do either Mr. Coleman or Dr. Woolridge recognize the significance of the current,**
510 **high valuations in the utilities sector?**

511 A. No, they do not. Mr. Coleman and Dr. Woolridge both place primary weight on the
512 results of the DCF model, which is estimated using current stock prices. Their reliance
513 on current share prices assumes that markets are efficient. But that is not always the
514 case. In fact, in a recent interview with Barron's, Professor Aswath Damodaran noted
515 the following regarding the efficient market assumption:

516 I'm not an academic. I'm a pragmatist. I don't believe that markets
517 are efficient, but I also don't believe that much of active investing,
518 at least as practiced now, has a prayer at finding and exploiting
519 these inefficiencies for profit. But I do think that markets always
520 convey messages. And if you ignore those messages, or you think
521 you're bigger than the market, the market's going to take you
522 down several notches. So I think that is my overriding message—
523 get away from static to dynamic, from backward-looking to
524 forward-looking. And that scares people.³⁰

525 Mr. Coleman and Dr. Woolridge both fail to take into consideration that the current,
526 high valuations in the utilities sector result in dividend yields well below the historical
527 average for electric utilities. Because the dividend yield is an input into DCF models,

²⁹ Strauss, Lawrence C. "Utility Stocks Aren't Acting Like The Havens They're Supposed Be. Here's Why." Utility Stocks Aren't Acting Like The Havens They're Supposed Be - Barron's, 12 June 2020, www.barrons.com/articles/utility-stocks-arent-acting-like-the-havens-theyre-supposed-be-51591979393.

³⁰ Root, Al. "Buying Tesla at \$180 and Other Investing Nuggets From NYU Professor Aswath Damodaran." Barron's, 25 June 2020, www.barrons.com/articles/how-to-value-stocks-according-to-nyu-professor-aswath-damodaran-51593082800.

528 these current conditions affect the reliability of DCF models. Nonetheless,
529 Mr. Coleman and Dr. Woolridge argue that their DCF models produce reliable results.

530 **Q. Utilities traditionally have been a safe-haven for investors during periods of**
531 **market volatility. Has this been true during the recent period of volatility?**

532 A. No, it has not. Contrary to the testimony of Dr. Woolridge, who expresses concern with
533 the recent increase in Value Line Beta coefficients for electric utilities,³¹ these stocks
534 have not been a safe-haven for investors during the COVID-19 pandemic. To this point,
535 Charles Schwab recently rated the Utilities sector as “Underperform,” noting that:

536 The Utilities sector has tended to perform better when growth and
537 trade concerns resurface, and to underperform when those
538 concerns fade. That’s partly because of the sector’s traditional
539 defensive nature—people need water, gas and electric services
540 during all phases of the business cycle—and these are domestic
541 goods and services, so it has very little international exposure.

542 However, amid the drop in stocks in February and March, the
543 historically low-equity-beta Utilities sector simply didn’t play its
544 traditional relative safe-haven role. The sharp drop in interest rates
545 would normally be expected to provide relative support to this
546 sector, which relies on high levels of debt and tends to pay
547 relatively high dividends—often an attraction for investors when
548 yields on fixed income investments are low. However, there were
549 unique circumstances that outweighed these historical
550 relationships.

551 For one thing, because some investors had already been reaching
552 for yield before the crisis began, the high-dividend-paying
553 Utilities sector had been bid up to record-high valuation levels.
554 Even underperformance year-to-date hasn’t fully reversed those
555 relatively high valuations, so we’re not confident the sector will
556 return to its defensive roots if markets sell off again.³²

³¹ Direct Testimony of Dr. J. Randall Woolridge, at 51-54.

³² Charles Schwab, Utilities Sector Rating: Underperform, August 13, 2020.

557 **Q. How has the utilities sector performed in 2020 relative to the S&P 500?**

558 A. The utilities sector has been one of the worst performing market sectors in 2020, having
559 declined by 14.44 percent from the mid-February peak as compared to a 3.70 percent
560 decline for the S&P 500.³³ The only market sectors that have underperformed utilities
561 in 2020 are industrials (down 15.94 percent), financials (down 23.42 percent) and
562 energy (down 54.02 percent). The other six market sectors are either down slightly
563 from their peak or are at or near record highs.

564 Dr. Woolridge also agrees that utility stocks lost their identity as safe-haven
565 investments in March and April of 2020.³⁴ This change in the risk of utilities is partly
566 because demand for electricity decreased as non-essential businesses in many parts of
567 the country were forced to close for a period in March through May, and have re-open
568 slowly in June and July. While electricity demand is typically inelastic, the load data
569 demonstrates that utilities have been affected by COVID-19. In August 2020, the U.S.
570 Energy Information Administration forecast that overall electricity sales would
571 decrease by 3.6 percent in 2020 compared to 2019. Commercial sales are projected to
572 decline by 7.4 percent this year due to COVID-19 mitigation efforts, electricity sales
573 to the industrial sector are expected to fall by 5.8 percent, while residential electricity
574 sales are projected to increase by 2.0 percent.³⁵ The underperformance of the utilities
575 sector is an indication that it has become more difficult for utilities to attract capital in
576 the current economic environment. While their dividend yields remain attractive to
577 income-oriented investors, there is heightened risk that lower electricity demand will

³³ Data as of July 31, 2020.

³⁴ Direct Testimony of Dr. J. Randall Woolridge, at 15.

³⁵ U.S. Energy Information Administration: Short-Term Energy Outlook, August 11, 2020, at 4.

578 cause electric utilities without revenue decoupling mechanisms to be unable to earn
579 their authorized return for several quarters until demand returns to pre-COVID-19
580 levels.

581 **Q. What are your conclusions regarding the recent valuations of utilities and the**
582 **effect on the cost of equity for RMP in this proceeding?**

583 A. While the share prices of utilities have declined in response to the economic effects of
584 the COVID-19 pandemic, current utility valuations are still well above the long-term
585 average. The current high valuations result in low dividend yields for utilities, which
586 means that DCF models using recent historical data likely underestimate investors'
587 required returns. Alternatively, my CAPM analysis includes estimated returns based on
588 near-term and longer-term projected interest rates, considers Beta coefficients that
589 reflect the fact that analysts expect utilities to trade similar to the market over the near-
590 term, and relies on a forward-looking estimate of the market return. Therefore, it is
591 important to consider the results of each of the models to reflect investors' expectations
592 of market conditions over the period that the rates established in this proceeding will
593 be in effect.

594 **Q. Have either Mr. Coleman or Dr. Woolridge considered the effects of the TCJA**
595 **when developing their recommended ROE?**

596 A. No, they have not. Because Mr. Coleman and Dr. Woolridge did not consider the TCJA,
597 it appears each witness believes that any effect of the TCJA is already taken into
598 consideration in the share prices that are used in the DCF model. As discussed in my
599 direct testimony, it is reasonable to expect that investors have reviewed the reports
600 published by the credit rating agencies such as Moody's, Standard and Poor's ("S&P")

601 and FitchRatings (“Fitch”) and are therefore considering the effects of the TCJA.³⁶
602 However, utilities are still working with regulators to determine appropriate solutions
603 to mitigate the effect of the TCJA on cash flows. In fact, in addition to the Commission,
604 two other commissions, the Wyoming Public Service Commission (Wyoming PSC)³⁷
605 and the Oregon Public Utility Commission (Oregon PUC)³⁸ where RMP operates have
606 recently acknowledged the negative effect of the TCJA on the cash flow of utilities.
607 Moreover, as shown in figure 10 of my direct testimony, Moody’s has continued to
608 downgrade utilities in 2020 as a result of tax reform, which suggests that Moody’s is
609 continuing to evaluate the effect of the TCJA on the cash flows of individual utilities.

610 **Q. What are your conclusions regarding the effect of the TCJA on RMP’s capital**
611 **structure and ROE?**

612 A. The issue with respect to the TCJA is not whether this policy has been internalized in
613 the DCF model. Rather, the issue is how to consider this policy when determining the
614 appropriate ROE for the Company from within the range of ROE results that are
615 produced using all of the ROE estimation models. The TCJA has been identified by the
616 credit rating agencies as credit negative due to the increase to the financial risk of the
617 utilities sector. This is an important factor to consider in setting the appropriate ROE
618 and equity ratio for RMP.

³⁶ Direct Testimony of Ann E. Bulkley, at 32-33.

³⁷ *In the Matter of Questar Gas Company dba Dominion Energy Wyoming’s Application for Approval of Amended Stipulation Previously Approved in Docket No. 30010-150-GA-16, Docket No. 30010-180-GA-18 (Record No. 15138) (Aug. 20, 2019).*

³⁸ Report and Order, Docket No. 19-057-02, Dominion Energy Utah, February 25, 2020, at 6.

619 **VI. RESPONSE TO DIVISION WITNESS MR. COLEMAN**

620 **Q. Please summarize Division Witness Mr. Coleman’s ROE and capital structure**
621 **recommendations.**

622 A. Mr. Coleman develops a recommended ROE range for RMP of 7.24 percent to 9.17
623 percent.³⁹ The low-end of the range was set equal to the average of his Constant Growth
624 DCF, CAPM and Risk Premium results while the high-end of the range was set equal
625 to the results of his Constant Growth DCF model using projected earnings and dividend
626 growth rates from Value Line. Ultimately, Mr. Coleman recommends a 9.25 percent
627 ROE for RMP. His recommendation is above the high-end of his range of
628 reasonableness, which Mr. Coleman indicates is to account for “policy considerations,
629 the Division’s own evaluation of current market risks and RMP’s individual risk
630 profile.”⁴⁰ Mr. Coleman accepts the Company’s proposed capital structure, composed
631 of 53.67 percent common equity and 46.32 percent long-term debt, as reasonable.⁴¹

632 **Q. Do you agree with Mr. Coleman’s ROE recommendation?**

633 A. No, I do not. Mr. Coleman calculates the model results for the Constant Growth DCF,
634 CAPM and Risk Premium; however, he does not ultimately rely on the results of these
635 models when selecting the ROE for RMP. According to Mr. Coleman, his ROE
636 estimation models support an ROE range of 7.24 percent to 9.17 percent, but Mr.
637 Coleman recommends an ROE of 9.25 percent. Mr. Coleman suggests that his
638 recommendation is based on the principle of gradualism.⁴² Mr. Coleman contends that
639 an adjustment to RMP’s authorized ROE of 9.80 percent from the Company’s last rate

³⁹ Direct Testimony of Casey J. Coleman, at 67.

⁴⁰ *Ibid.*

⁴¹ *Id.*, at 22.

⁴² *Id.*, at 53.

640 case to the mid-point of his range of 7.24 percent to 9.17 percent would be considered
641 a significant adjustment.⁴³ Therefore, it appears Mr. Coleman applies the principle of
642 gradualism and adjusts RMP's authorized ROE from the Company's last rate
643 proceeding of 9.80 percent by 55 basis points to arrive at his recommendation of 9.25
644 percent.

645 **Q. How did Mr. Coleman calculate his adjustment to the Company's last ROE to**
646 **establish his recommendation of 9.25 percent?**

647 A. It is not clear how Mr. Coleman developed the specific reduction of 55 basis points.
648 Mr. Coleman cites to the Commission's decision in Docket No. 19-057-02 for
649 Dominion Energy Utah ("DEU") where he asserts the Commission "implicitly"
650 invoked the principle of gradualism and adjusted DEU's authorized ROE by 35 basis
651 points from 9.85 percent in Docket No. 13-057-05 (February 2014) to 9.50 percent
652 (February 2020).⁴⁴ However, Mr. Coleman's adjustment is 20 basis points greater than
653 the adjustment applied by the Commission in DEU's rate case. Moreover, as I discuss
654 above, market conditions have changed substantially since the Commission issued its
655 order in February 2020 for DEU. The effects of COVID-19 have resulted in
656 unprecedented uncertainty and volatility in financial markets that would imply an
657 increase, not a decrease, in the authorized ROE for RMP.

658 **Q. What are the principal areas of disagreement between you and Mr. Coleman?**

659 A. The principal areas where I disagree with Mr. Coleman are as follows:

660 1. Mr. Coleman's misapplication of the Commission's weighting factor from
661 Docket No. 02-057-02 for DEU (formerly Questar Gas Company) for

⁴³ *Id.*, at 53-54.

⁴⁴ *Id.*, at 52.

- 662 projected earnings and dividend growth rates in the Constant Growth DCF
663 model;
- 664 2. the reasonableness of the results produced by the Constant Growth DCF
665 model under current market conditions;
- 666 3. certain inputs and assumptions used in the CAPM analysis, including the
667 risk-free rate, the Beta coefficient, and the market risk premium;
- 668 4. the calculation of the Bond Yield Plus Risk Premium model;
- 669 5. the relevance of the Expected Earnings Analysis; and
- 670 6. whether the business risks of RMP relative to the proxy group companies
671 support an ROE higher than the mean/median for the proxy group.

672 Each of these areas of disagreement is discussed in this section.

673 **A. Constant Growth DCF Analysis**

674 **Q. Please summarize Mr. Coleman’s Constant Growth DCF analysis.**

675 A. Mr. Coleman develops a Constant Growth DCF analysis using the proxy group that I
676 relied on in my direct testimony. To calculate the dividend yield, Mr. Coleman uses the
677 average stock price for each company for the trading period of July 1, 2020 through
678 July 31, 2020 and dividend per share data for each company reported by Value Line.⁴⁵
679 He then adjusts the dividend yield for future growth using a full year of projected
680 dividend growth. For the growth rate, Mr. Coleman uses earnings growth rate
681 projections reported by Value Line, Zacks Investment Research (“Zacks”) and Yahoo!
682 Finance (“Yahoo!”) and dividend growth rate projections from Value Line. The growth
683 rate estimate is then calculated by applying a 75 percent weight to the earnings growth

⁴⁵ Direct Testimony of Casey J. Coleman, at 39.

684 rate projections and a 25 percent weight to the dividend growth rate projections.⁴⁶ Mr.
685 Coleman calculates two versions of the Constant Growth DCF model. The first version
686 relies on only Value Line as the source for the earnings growth and dividend growth
687 rate projections and produces a mean result of 9.17 percent while the second version
688 relies on earnings growth rate projections from Yahoo!, Zacks and Value Line and
689 dividend growth rate projections from Value Line and produces a mean result of 8.91
690 percent.⁴⁷

691 **Q. Do you agree with the proxy group that Mr. Coleman relies on for his Constant**
692 **Growth DCF analysis?**

693 A. While Mr. Coleman indicates that he has relied on the same proxy group that I relied
694 on to develop my direct testimony, Mr. Coleman includes CenterPoint Energy, Inc. and
695 FirstEnergy Corporation in his proxy group which were not included in the proxy group
696 that I relied on in my direct testimony. CenterPoint Energy, Inc. was excluded because
697 the company announced a dividend cut in April 2020, while FirstEnergy Corporation
698 was excluded because the company did not have a positive earnings growth rate from
699 more than one source. As a result, I continue to believe it is appropriate to exclude both
700 companies from the proxy group used to estimate the ROE for RMP.

701 **Q. Are there other assumptions in Mr. Coleman's Constant Growth DCF analysis**
702 **that you disagree with?**

703 A. Yes. First, the source of the data used in Mr. Coleman's analysis is not clear. Mr.
704 Coleman states that he has relied on the annualized dividend for 2020, earnings growth
705 rate projections and dividend growth rate projections from Value Line as of July 16,

⁴⁶ *Ibid.*

⁴⁷ *Id.*, at 40.

706 2020.⁴⁸ However, the Value Line data provided in DPU Exhibit 2.03 DIR is not
707 consistent with the data reported for each company in the most recent Value Line
708 reports for the West, East, and Central electric utility groups that were released on April
709 24, 2020, May 15, 2020, and June 12, 2020, respectively. For example, Mr. Coleman
710 has relied on an earnings growth rate projection of 0.00 percent and a dividend growth
711 rate of 0.00 percent for Evergy, Inc.; however, in the most recent Value Line report for
712 Evergy, Inc. published on June 12, 2020, Value Line reports an earnings growth rate
713 projection of 3.00 percent and a dividend growth rate projection of 5.50 percent.

714 **Q. How is the DCF model typically specified?**

715 A. The more conventional approach to specifying the Constant Growth DCF model would
716 be to rely on the data for each company in the most recently published Value Line
717 report consistent with the time period used to calculate the pricing data in Mr.
718 Coleman's Constant Growth DCF model. In this case, Mr. Coleman relied on the 30-
719 day average price for the period of July 1, 2020 through July 31, 2020; therefore, Mr.
720 Coleman should have relied on the Value Line reports published for the East, Central
721 and West electric utility groups as of May 15, 2020, June 12, 2020 and July 24, 2020,
722 respectively.

723 **Q. Are there other issues with the approach Mr. Coleman used to specify the**
724 **Constant Growth DCF model?**

725 A. Yes. As shown in DPU Exhibit 2.03 DIR, Mr. Coleman calculates the expected
726 dividend yield by multiplying the current dividend yield by Value Line's projected
727 dividend growth rate. This growth rate is inconsistent with the estimate of growth that

⁴⁸ *Id.*, at 39.

728 Mr. Coleman uses in the Constant Growth DCF model. For the Constant Growth DCF
729 model, Mr. Coleman indicates that he has applied a weighting of 0.75 to the projected
730 earnings growth rate and a 0.25 weighting to the dividend projected growth rate to
731 calculate the growth rate. Since Mr. Coleman is calculating a Constant Growth DCF
732 model, it would be conventional to apply a consistent growth rate to the dividend yield
733 as is used for growth over time, in Mr. Coleman's analysis that would be the weighted
734 growth rate projection.

735 **Q. Have you adjusted Mr. Coleman's Constant Growth DCF analysis?**

736 A. Yes. As shown in Exhibit RMP___ (AEB-6R), I adjusted Mr. Coleman's Constant
737 Growth DCF analysis to: 1) exclude CenterPoint Energy, Inc. and FirstEnergy
738 Corporation; 2) rely on the Value Line reports published for the East, Central and West
739 electric utility groups as of May 15, 2020, June 12, 2020 and July 24, 2020,
740 respectively; and 3) rely on the weighted growth rate (i.e., $0.75 \times \text{earnings growth} +$
741 $0.25 \times \text{dividend growth}$) to calculate the expected dividend yield. I applied the
742 adjustments to Mr. Coleman's Constant Growth DCF analysis, which relied on the
743 earnings growth rates from Yahoo!, Zacks and Value Line, as it is more appropriate to
744 rely on earnings growth rates from multiple analysts. This results in an increase in Mr.
745 Coleman's Constant Growth DCF results from 8.91 percent to 8.97 percent.

746 **Q. What is your response to Mr. Coleman's contention that the growth rate you**
747 **relied on in your Constant Growth DCF model is inconsistent with the**
748 **Commission's order in Docket No. 02-057-02?**

749 A. Mr. Coleman states that in Docket No. 02-057-02 for DEU, the Commission
750 determined that the growth rate in the Constant Growth DCF model should be

751 calculated by applying a 0.75 weighting factor to the earnings growth rate projections
752 and a 0.25 weighting factor to the dividend growth rate projections.⁴⁹ However, Mr.
753 Coleman misrepresents the Commission’s decision in Docket No. 02-057-02.
754 Specifically, the Commission determined:

755 We resolve the dispute over the relative role of dividend growth
756 forecasts and earnings growth forecasts as the basis for the DCF
757 growth rate “g”. We will use three earnings growth forecasts – the
758 Company’s IBES forecast, the Value Line forecast, and the
759 Division’s Zacks’ forecast – averaging the three observations for
760 each proxy company in the seven-company sample. We will also
761 employ the Value Line dividend growth forecast. From these, we
762 derive a weighted average (three-fourths earnings growth, one-
763 fourth dividend growth) growth rate. When applied to each proxy
764 company, the mean DCF result is 10.9 percent. This value, we
765 conclude, will be the low end of the range of reasonable returns.
766 The high end of the range is similarly derived, but 100 percent
767 weight is accorded to earnings growth forecasts. When this growth
768 rate is used, the mean of sample results is 12.2 percent. This is the
769 value we will use as the high end of the range.⁵⁰

770 Therefore, the Commission developed two weighting scenarios for the growth rate in
771 the Constant Growth DCF model to determine the range of reasonable returns in the
772 case for DEU.⁵¹ The first scenario applied a 0.75 weighting to earnings growth and a
773 0.25 weighting to dividend growth, which set the low end of the range, and the second
774 scenario applied a 100 percent weighting to the earnings growth rate scenario, which
775 set the high end of the range. In his testimony in this proceeding, Mr. Coleman has only
776 calculated the “low-end scenario” from the Commission’s decision in Docket No. 02-
777 057-02.

⁴⁹ *Id.*, at 15.

⁵⁰ Report and Order, Docket No. 02-057-02, Questar Gas Company, December 30, 2002, at 36.

⁵¹ *Ibid.*

778 **Q. What was the Commission’s concern in Docket No. 02-057-02 with relying only**
779 **on earnings growth projections in the DCF model?**

780 A. At the time, the Commission was concerned that analysts had a history of overstating
781 the earnings growth rate projections for companies.⁵² Therefore, while the
782 Commission considered DEU’s argument that investors rely less on dividend growth
783 rates, the Commission believed it was still prudent to accord dividend growth weight
784 in the calculation of the growth rate for the Constant Growth DCF model.

785 **Q. Why do you believe that earnings growth rates are the appropriate growth rates**
786 **in the DCF model?**

787 A. Earnings are the fundamental driver of a company’s ability to pay dividends; therefore,
788 earnings growth is the appropriate measure of a company’s long-term growth. As noted
789 by Brigham and Houston:

790 Growth in dividends occurs primarily as a result of growth in
791 earnings per share (EPS). Earnings growth, in turn, results from a
792 number of factors, including (1) inflation, (2) the amount of
793 earnings the company retains and invests, and (3) the rate of return
794 the company earns on its equity (ROE).⁵³

795 In contrast, changes in a company’s dividend payments are based on management
796 decisions related to cash management and other factors. For example, a company may
797 decide to retain certain earnings rather than include those earnings in a dividend
798 issuance. Therefore, dividend growth rates are less likely than earnings growth rates to
799 reflect investor perceptions of a company’s growth prospects.

⁵² *Id.*, at 33.

⁵³ Eugene F. Brigham and Joel F. Houston, *Fundamentals of Financial Management*, at 317 (Concise Fourth Edition, Thomson South-Western, 2004).

800 Furthermore, investment analysts report predominant reliance on EPS growth
801 projections. In a survey completed by 297 members of the Association for Investment
802 Management and Research, the majority of respondents ranked earnings as the most
803 important variable in valuing a security (more important than cash flow, dividends, or
804 book value).⁵⁴

805 Academic research also supports the use of EPS growth estimates. A 2002 study
806 in the *Journal of Accounting Research*, examined “the valuation performance of a
807 comprehensive list of value drivers” and found that “forward earnings explain stock
808 prices remarkably well” and were generally superior to other value drivers analyzed.⁵⁵

809 A 2012 study from the journal *Contemporary Accounting Research* found that the sell-
810 side analysts with the most accurate stock price targets were those whom the
811 researchers found to have more accurate earnings forecasts.⁵⁶

812 **Q. Has the Commission’s concern regarding earnings growth rates been addressed**
813 **since Commission’s order was issued in December 2002?**

814 A. Yes. The 2003 Global Analysts Research Settlement (the “Global Settlement”) served
815 to significantly reduce the bias referred to by the Commission in its order in Docket No
816 02-057-02. The Global Settlement required financial institutions to insulate investment
817 banking from analysis, prohibited analysts from participating in “road shows,” and
818 required the settling financial institutions to fund independent third-party research. In
819 addition, analysts covering the common stock of the proxy companies certify that their

⁵⁴ Block, Stanley B., “A Study of Financial Analysts: Practice and Theory”, *Financial Analysts Journal* (July/August 1999).

⁵⁵ Liu, Jing, et al., “Equity Valuation Using Multiples,” *Journal of Accounting Research*, Vol. 40 No. 1, March 2002.

⁵⁶ Gleason, C.A., et al., “Valuation Model Use and the Price Target Performance of Sell-Side Equity Analysts,” *Contemporary Accounting Research*.

820 analyses and recommendations are not related, either directly or indirectly, to their
821 compensation.

822 A 2010 article in *Financial Analysts Journal* found that analyst forecast bias
823 declined significantly or disappeared entirely since the Global Settlement:

824 Introduced in 2002, the Global Settlement and related regulations
825 had an even bigger impact than Reg FD on analyst behavior. After
826 the Global Settlement, the mean forecast bias declined
827 significantly, whereas the median forecast bias essentially
828 disappeared. Although disentangling the impact of the Global
829 Settlement from that of related rules and regulations aimed at
830 mitigating analysts' conflicts of interest is impossible, forecast
831 bias clearly declined around the time the Global Settlement was
832 announced. These results suggest that the recent efforts of
833 regulators have helped neutralize analysts' conflicts of interest.⁵⁷

834 **Q. Do you have any other observations regarding the Commission's order in Docket**
835 **No. 02-057-02?**

836 A. Yes. As discussed above, the Commission developed a range of reasonableness for the
837 ROE based on applying a 100 percent weighting to earnings growth in one scenario
838 and a 0.75 weighting to earnings growth and a 0.25 weighting to dividend growth in
839 the second scenario. The Commission then selected an ROE for DEU that was within
840 the determined range of reasonableness.⁵⁸ However, Mr. Coleman has not developed
841 an ROE range for his Constant Growth DCF analysis. Mr. Coleman only calculates his
842 DCF results using the mean growth rate for each of his proxy group companies, which
843 is derived by averaging the three sources of earnings growth rate projections. This
844 produces a very narrow range of results that Mr. Coleman considers to be reflective of
845 investors' expectations. While I believe it is more appropriate to rely only on earnings

⁵⁷ Armen Hovakimian and Ekkachai Saenyasiri, *Conflicts of Interest and Analyst Behavior: Evidence from Recent Changes in Regulation*, *Financial Analysts Journal*, Volume 66, Number 4, July/August 2010, at 195.

⁵⁸ Report and Order, Docket No. 02-057-02, *Questar Gas Company*, December 30, 2002, at 36.

846 growth rates as opposed to dividend growth rates, it is still possible to calculate a range
847 of results using only earnings growth rates. As shown in Exhibit RMP____(AEB-4) to
848 my direct testimony, I consider the full range of results indicated by the mean as well
849 as the mean high and mean low of the EPS growth rate projections published by Value
850 Line, Zacks, and Yahoo! Finance. This analysis produces a broader range of what can
851 be considered investors' expected returns on the proxy group companies and is more
852 consistent with the Commission order in Docket 02-057-02.

853 **Q. Have you adjusted Mr. Coleman's Constant Growth DCF analysis to produce a**
854 **range of ROE results?**

855 A. Yes. As shown in Exhibit RMP____(AEB-6R), I adjusted Mr. Coleman's Constant
856 Growth DCF analysis to: 1) rely only on earnings growth rate projections; and 2)
857 calculate a full range of results using the mean as well as the mean high and mean low
858 of the EPS growth rate projections published by Value Line, Zacks, and Yahoo!
859 Finance. This resulted in a mean ROE of 8.91 percent and a range of results from 7.99
860 percent to 9.81 percent.

861 **Q. Mr. Coleman expresses concern with your elimination of DCF results below 7.00**
862 **percent. Please explain why it is appropriate to eliminate these results.**

863 A. As discussed in my direct testimony, I eliminated DCF results below 7.0 percent as
864 such low returns do not provide equity investors with adequate compensation for the
865 risks associated with common stock ownership, and do not offer a return that is
866 sufficiently above the long-term debt costs for regulated utilities, as indicated by the
867 Moody's Baa-rated bond yield index. Furthermore, authorized returns below 7.0
868 percent have never been observed for a vertically integrated electric utility in at least

869 the last 40 years. Finally, in Opinion No. 569-A, the FERC also determined that it was
870 appropriate to eliminate low outliers from the DCF results before developing the range
871 of reasonableness.⁵⁹ The FERC also modified its high outlier screen that is equal to
872 200 percent of the median threshold for the proxy group.⁶⁰ In summary, I continue to
873 believe that it is reasonable and appropriate to eliminate DCF results below 7.0 percent.

874 **Q. Has the Commission considered a low-end threshold for ROE results?**

875 A. Yes. In Docket No. 13-057-05 for DEU, the Commission concluded that:

876 In light of the evidence discussed above, we find that Questar's
877 request for continuation of its currently authorized 10.35 percent
878 return on equity is not justified. While we decline to grant
879 Questar's request to maintain a 10.35 percent return on equity, we
880 also find the evidence of record shows a 9.25 or 9.45 return on
881 equity is too low to support properly Questar's operations. In
882 surrebuttal testimony, the Division's witness provides 2013
883 authorized returns on equity for natural gas distribution companies
884 through December 27, 2013, resulting in a range from 9.08 percent
885 to 10.25 percent, with a mean of 9.66 percent.⁷⁵ When looking at
886 authorized returns on equity for the last quarter of 2013, there
887 appears to be an upward trend in authorized returns on equity with
888 an average authorized return on equity of 9.81 percent.

889 These data support a return on equity that is meaningfully higher
890 than the proposals of the Office and the Division. Moreover, this
891 conclusion is consistent with the range of model results presented
892 by the various expert witnesses.⁶¹

893 Thus, the Commission determined that an ROE in the range of 9.25 percent to 9.45
894 percent would not provide a sufficient risk premium to compensate investors for the
895 additional risk of an equity investment. Therefore, the low-end screen of 7.00 percent
896 that I have applied to the individual results of my Constant Growth DCF analysis is
897 generally consistent with the Commission's position.

⁵⁹ FERC Opinion No. 569-A, issued May 21, 2020, at para. 156-161.

⁶⁰ *Id.*, at para. 154-155.

⁶¹ Report and Order, Docket No. 13-057-05, Questar Gas Company, February 21, 2014, at 33-34.

898 **Q. How would Mr. Coleman’s Constant Growth DCF results change if he had**
 899 **excluded individual ROE results less than 7.00 percent?**

900 A. As shown in Exhibit RMP ____ (AEB-6R), I re-calculated Mr. Coleman’s Constant
 901 Growth DCF result to exclude individual company results that were less than 7.00
 902 percent. This results in a mean Constant Growth DCF result of 9.05 percent and a range
 903 of 8.56 percent to 9.97 percent.

904 **Q. Please summarize the effects of the changes that you made to Mr. Coleman’s**
 905 **Constant Growth DCF results.**

906 A. As shown in Figure 9, by making reasonable changes to Mr. Coleman’s Constant
 907 Growth DCF analysis that relied on earnings growth rate projections from Yahoo!,
 908 Zacks and Value Line, the mean ROE result increases from 8.91 percent to 9.05
 909 percent. In addition, relying on the range of earnings growth rates produces a mean-
 910 high result of 9.97 percent. Therefore, Mr. Coleman’s adjusted Constant Growth DCF
 911 model produces a mean to mean-high ROE range of 9.05 percent to 9.97 percent. While
 912 I have included the mean-low results, I do not believe the mean-low results provide a
 913 sufficient risk premium to compensate investors for the additional risk of an equity
 914 investment.

915 **Figure 9: Summary of Adjustments to Mr. Coleman’s Constant Growth DCF**

	Mean	Mean ROE Range
As Filed	8.91%	N/A
Excl. FE & CNP, & Updated Value Line Data	8.97%	N/A
Excl. FE & CNP, Updated Value Line Data & Earnings Growth Rates Only	8.91%	7.99% - 9.81%
Excl. FE & CNP, Updated Value Line Data, Earnings Growth Rates Only & Excl. Individual Results < 7 percent	9.05%	8.56% - 9.97%

916 **B. Effect of Market Conditions on the DCF**

917 **Q. Does Mr. Coleman rely primarily on the results of his Constant Growth DCF**
918 **model in setting the recommended ROE for RMP?**

919 A. Mr. Coleman contends that he has placed primary weight on the results of his Constant
920 Growth DCF model to develop his recommended ROE for RMP.⁶² However, Mr.
921 Coleman recommends a 9.25 percent ROE, which is greater than the 8.91 percent and
922 9.17 percent ROE results from his Constant Grow DCF model. Therefore, while Mr.
923 Coleman does not account for the effect of current market conditions on the inputs to
924 the DCF model, it appears that Mr. Coleman has implicitly recognized that the results
925 of the DCF model are too low to be considered reasonable by selecting a recommended
926 ROE that is greater than the results produced by his Constant Growth DCF model.

927 **Q. Why is it important to consider how current market conditions affect the results**
928 **of the DCF model?**

929 A. In general, investors use the DCF model to develop return estimates for a company as
930 of a specific date factoring in all the information available to them at the time of the
931 estimation. However, for a regulated utility like RMP, the cost of equity is being
932 estimated for a future period when the utility's rates will be in effect. Therefore,
933 investors' current valuations may be different than the valuations investors would
934 calculate during the period that the Company's rates will be in effect. For this reason,
935 it is important to review current and prospective capital market conditions and to
936 determine whether current market conditions are expected to persist during the period
937 that the Company's rates will be in effect. If prospective market conditions are expected

⁶² Direct Testimony of Casey J. Coleman, at 65.

938 to be different than current market conditions, the ROE models based on current market
939 data will not produce reasonable estimates of the cost of equity during the period that
940 RMP's rates will be in effect.

941 As discussed in my direct testimony and in Section V of my Rebuttal
942 Testimony, many analysts have cautioned investors regarding the current high
943 valuations of utilities. In fact, as shown in Figure 8 of my rebuttal testimony, Value
944 Line projects the P/E ratio for the utilities in my proxy group to decline over the near-
945 term. If the valuations of utilities decline, then the dividend yields of those utilities will
946 increase, resulting in increases in the ROE estimate produced by the DCF model. Given
947 that we are estimating the cost of equity for the period that RMP's rates will be in effect,
948 this is an important factor that must be considered when relying on the results produced
949 by the ROE estimation models.

950 **Q. Do current market conditions highlight the importance of calculating a range of**
951 **DCF results?**

952 A. Yes. Mr. Coleman's DCF analysis relies primarily on the mean result; however, given
953 the effect of current market conditions, these results are likely underestimating the cost
954 of equity during the period that RMP's rates will be in effect. Therefore, it is important
955 to develop a range of DCF results so that the effect of market conditions can be
956 considered. As discussed above, adjusting Mr. Coleman's Constant Growth DCF
957 model to calculate mean-low, mean and mean-high results based on the range of
958 earnings growth rates published by Yahoo!, Zacks and Value Line results in a range
959 that then can be used to consider other factors such as capital market conditions. As
960 shown in Figure 9, after making reasonable adjustments to Mr. Coleman's DCF model,

961 the mean result is 9.05 percent, and the range is 8.56 percent to 9.97 percent.
962 Considering that the valuations of utilities are expected to decline over the near-term,
963 it is reasonable to assume that the mean-low and mean results are likely understating
964 the cost of equity for RMP during the period that rates will be in effect. Therefore, it is
965 more reasonable to consider an ROE towards the high-end of the range of the DCF.

966 **Q. Has the Commission considered current market conditions when determining the**
967 **ROE in past decisions?**

968 A. Yes. In a recent decision for DEU in Docket No. 19-057-02, the Commission noted the
969 authorized ROE awarded to DEU in its last fully litigated rate case in February 2014
970 and then considered what changes had occurred in financial conditions since that time
971 to determine if the Company's ROE should be reduced or increased.⁶³ Specifically, the
972 Commission stated:

973 In February 2014, we reduced DEU's authorized ROE by 50 basis
974 points, from 10.35% to 9.85%. We begin our evaluation by
975 considering the extent to which financial conditions have changed
976 since that decision, and the impact those changed conditions
977 should have on DEU's authorized ROE. Issues that can be viewed
978 as "credit negative" for DEU, potentially leading to an increase in
979 its authorized ROE, include the federal tax reform enacted in late
980 2017 and the Federal Reserve's cessation of injecting capital into
981 the market.⁶⁴

982 While the Commission concluded the ROE for DEU should be reduced, the
983 Commission placed a great deal of importance on the review of market conditions,
984 which Mr. Coleman has not considered in the current case for RMP. Moreover, since
985 the Commission's decision in the case for DEU, volatility and uncertainty in the
986 financial markets has reached levels not seen since the Great Recession of 08/09 as a

⁶³ Report and Order, Docket No. 19-057-02, Dominion Energy Utah, February 25, 2020, at 6.

⁶⁴ *Ibid.*

987 result of the effects of COVID-19. As discussed above, while the Federal Reserve and
988 Congress have intervened at unprecedented levels, which has brought stability to the
989 market, volatility still remains well above long-term levels and certainly higher than it
990 was in 2019. This would imply an increase in the cost of equity since the time the
991 Commission's decision was issued in the rate case for DEU.

992 **Q. What are your conclusions regarding Mr. Coleman's Constant Growth DCF**
993 **analysis?**

994 A. Mr. Coleman's Constant Growth DCF analysis results in a narrow range of mean
995 results that are unreasonably low. This is primarily the result of his failure to a) develop
996 a range of DCF scenarios based on the range of earnings growth rates; and b) consider
997 the effects of current market conditions on the results of the inputs used in the DCF
998 model. As shown in Figure 9 (see also Exhibit RMP ____ (AEB-6R), making corrections
999 and appropriate adjustments to Mr. Coleman's Constant Growth DCF analysis results
1000 in a mean to mean-high range of results of 9.05 percent to 9.97 percent. My conclusion
1001 is that this revised DCF analysis, along with proper consideration of market conditions,
1002 Company risk factors, and other ROE estimation methodologies provides a more
1003 appropriate representation of investors' return expectations for the Company.

1004 **C. Projected DCF Analysis**

1005 **Q. Please discuss Mr. Coleman's criticism of your Projected DCF analysis.**

1006 A. Mr. Coleman asserts that my projected DCF analysis undermines the premise of the
1007 DCF model, which is that only one assumption must be made in the model.⁶⁵ Since I
1008 am relying on projected data for each of the inputs to the model, Mr. Coleman contends

⁶⁵ Direct Testimony of Casey J. Coleman, at 16.

1009 that I have increased the likelihood the result will be inaccurate. Furthermore, Mr.
1010 Coleman concludes that projected growth rates are “not in the public interest and should
1011 not be included in the analysis for the ROE of RMP.”⁶⁶

1012 **Q. Do you agree with Mr. Coleman that your use of projections increases the**
1013 **likelihood the results of your Projected DCF analysis will be inaccurate?**

1014 A. No, I do not. The purpose of the Projected DCF analysis is to illustrate what would
1015 happen to dividend yields in the DCF model, using Value Line data, if the stock prices
1016 of the proxy group companies were to decline, as analysts predict. Value Line’s outlook
1017 on valuations and share prices for utilities is consistent with other equity analysts and
1018 investment advisors’ expectations of the overall market. As discussed in my direct
1019 testimony and Section V of my rebuttal testimony, the low interest rate environment
1020 following the Great Recession caused investors to shift out of government bonds and
1021 into dividend-paying stocks such as utilities. Thus, investors have driven up the share
1022 price of utilities, resulting in a corresponding reduction in the dividend yield.

1023 Section V of my rebuttal testimony notes that investors continue to expect an increase
1024 in long-term interest rates over the intermediate to longer-term despite the recent
1025 decline in yields on long-term government bonds due in large part to the Federal
1026 Reserve’s efforts to stimulate the economy and stabilize financial markets during the
1027 COVID-19 pandemic. An increase in long-term interest rates will cause utility
1028 investors to move back into long-term government bonds, as the yields on those bonds
1029 become more competitive with the dividend yields of utilities. A decrease in the stock
1030 price of utilities resulting from such a shift will increase the dividend yields of utilities.

⁶⁶ *Ibid.*

1031 Thus, the forward-looking cost of equity using the DCF model will increase. The
1032 projected stock prices developed by Value Line reflect this relationship. Consistent
1033 with market expectations, Value Line projects that the valuations of the companies in
1034 my proxy group will decrease over the near-term.

1035 **Q. What is your response to Mr. Coleman’s assertion that in the DCF model “only**
1036 **one assumption or calculation must be made, the appropriate dividend or**
1037 **earnings growth rate”?**⁶⁷

1038 A. As discussed above, in the instant proceeding, the cost of equity is being estimated for
1039 the period that RMP’s rates will be in effect. By relying on the dividend yield calculated
1040 using current share prices, Mr. Coleman is assuming that the market conditions that
1041 exist today will prevail over the near-term. Therefore, Mr. Coleman has violated his
1042 own logic regarding the DCF model that one assumption or calculation be made. Since
1043 we are trying to develop an estimate that reflects what investors’ expectations are
1044 regarding the cost of equity over the near-term, forecast data is important because it
1045 incorporates current data as well as expectations regarding near-term market
1046 conditions. The Projected DCF model provides support for the expectation that utility
1047 valuations are expected to decline over the near-term. As a result, current estimates
1048 provided by the DCF model will likely understate the cost of equity during the period
1049 that rates will be in effect.

⁶⁷ *Ibid.*

1050 **Q. Mr. Coleman states that “projected growth rates are not in the public interest and**
1051 **should not be included in the analysis for the ROE of RMP.”⁶⁸ Do you agree?**

1052 A. No, I do not. In fact, Mr. Coleman’s statement is inconsistent with the estimates of
1053 growth that he has relied on in his DCF analysis. Mr. Coleman relies on projected
1054 earnings growth rates from Zacks, Yahoo! and Value Line and projected dividend
1055 growth rates from Value Line. Therefore, Mr. Coleman’s contention would invalidate
1056 his own Constant Growth DCF analysis.

1057 **Q. Does Mr. Coleman rely on Value Line projections to calculate the results of his**
1058 **DCF analysis?**

1059 A. Yes. While Mr. Coleman criticizes my Projected DCF analysis that relies on three- to
1060 five-year projections of stock prices, Mr. Coleman himself relies on Value Line
1061 projections in developing his DCF analysis. Specifically, Mr. Coleman relies on Value
1062 Line’s EPS and DPS growth rate projections over the same time-period for his Constant
1063 Growth DCF analysis. As such, Mr. Coleman relies on the very same Value Line data
1064 and projection period that he asserts increases the likelihood of inaccurate DCF results.

1065 **D. CAPM Analysis**

1066 **Q. Please summarize Mr. Coleman’s CAPM analysis.**

1067 A. Mr. Coleman calculates his CAPM using the normalized 20-year U.S. Treasury yield
1068 of 2.50 percent as reported by Duff & Phelps as his estimate of the risk-free rate.⁶⁹ His
1069 Beta coefficients are from Value Line, Zacks, Yahoo! Finance and Ned Davis
1070 Research. Mr. Coleman relies on the recommended market risk premium (“MRP”)
1071 from Duff & Phelps of 6.00 percent and the average historical market risk premium as

⁶⁸ *Ibid.*

⁶⁹ Direct Testimony of Casey J. Coleman, at 41.

1072 calculated by Dr. Damodaran of 5.43 percent.⁷⁰ Mr. Coleman’s CAPM analysis
1073 produces cost of equity estimates ranging from 5.09 percent to 5.90 percent using the
1074 MRP from Duff and Phelps and 4.84 percent to 5.58 percent using the historical MRP
1075 from Dr. Damodaran.

1076 **Q. Does Mr. Coleman rely on the results of his CAPM analysis?**

1077 A. No. Mr. Coleman notes that his models produce a range of results from 7.24 percent to
1078 9.17 percent. The high-end of the range is based on Mr. Coleman’s Constant Growth
1079 DCF analysis, while the low-end of the range is set equal to the average of Mr.
1080 Coleman’s DCF, Risk Premium and CAPM results. However, Mr. Coleman ultimately
1081 recommends an ROE of 9.25 percent, which is greater than the range indicated by his
1082 model results. Furthermore, in regard to the range of results of 5.06 percent to 5.90
1083 percent from Mr. Coleman’s CAPM, Mr. Coleman notes “[l]ooking at the lower data
1084 points calculated using this model makes me a bit uncomfortable using CAPM rates
1085 exclusively.”⁷¹ Therefore, it appears that Mr. Coleman agrees that the results of his
1086 CAPM analysis are unreasonable. I agree with Mr. Coleman that his CAPM analysis is
1087 not producing reliable results and should not be used to inform the cost of equity
1088 estimate for RMP in this proceeding. The results of Mr. Coleman’s CAPM analysis are
1089 well below the authorized ROE for any U.S. electric utility in the past 40 years.⁷² As a
1090 result, Mr. Coleman’s CAPM analysis does not meet the comparable return
1091 requirement of *Hope* and *Bluefield*.

⁷⁰ *Id.*, at 42.

⁷¹ Direct Testimony of Casey J. Coleman, at 64.

⁷² Source: Regulatory Research Associates.

1092 **1. Risk-Free Rate**

1093 **Q. Please summarize the risk-free rate relied on by Mr. Coleman in his CAPM**
1094 **analysis.**

1095 A. Mr. Coleman relies exclusively on the normalized 20-year U.S. Treasury yield of 2.50
1096 percent as reported by Duff & Phelps.

1097 **Q. What concerns do you have about the risk-free rate relied on by Mr. Coleman in**
1098 **his CAPM analysis?**

1099 A. I do not specifically dispute Mr. Coleman's reliance on the normalized 20-year U.S.
1100 Treasury yield of 2.50 percent, as reported by Duff & Phelps. However, I am unsure of
1101 Mr. Coleman's reason for selecting a normalized interest rate that is greater than the
1102 current yields on long-term government bonds, especially in light of Mr. Coleman's
1103 concern with my use of projected interest rates. I relied primarily on interest rate
1104 forecasts to account for the fact that investors expect interest rates to increase from
1105 current levels over the near-term. Mr. Coleman's risk-free rate is also greater than the
1106 current yields on long-term government bonds, which would appear to imply that Mr.
1107 Coleman also expects interest rates to increase over the near-term. In fact, in his
1108 response to RMP Discovery Request No. 1.11, Mr. Coleman provides the definition of
1109 the normalized risk-free rate from Duff and Phelps which stated:

1110 [Duff and Phelps] introduced the concept of normalized risk-free
1111 rate to measure the risk-free [rate] that would prevail under normal
1112 market and monetary conditions. **To be clear, the normalized**
1113 **risk-free rate is not a long-term average of risk free rates. It is**
1114 **estimated based on current expected real rate of interest rates**
1115 **plus current expected inflation.**⁷³

⁷³ Response to RMP Discovery Request No. 1.11. (emphasis added).

1116 Based on the definition provided by Mr. Coleman, the normalized risk-free rate
1117 represents the expected real interest rate plus expected inflation. This would imply the
1118 normalized risk-free rate published by Duff and Phelps assumes long-term interest rates
1119 will increase.

1120 **Q. Does Mr. Coleman agree that the use of projected Treasury bond yields is**
1121 **appropriate in the CAPM?**

1122 A. No. Mr. Coleman argues that increases in interest rates in 2020 should not be expected
1123 given current market conditions.⁷⁴ In addition, Mr. Coleman believes that analysts
1124 have historically been inaccurate when projecting interest rates. To support his position,
1125 Mr. Coleman quotes articles from MarketWatch and the Wall Street Journal which note
1126 that economists have been incorrect in their projections of interest rates. Mr. Coleman
1127 concludes that if the Commission were to accept the use of projected interest rates, the
1128 resulting ROE would be “flawed and erroneous.”⁷⁵

1129 **Q. How do you respond to Mr. Coleman’s suggestion that projections of interest rates**
1130 **have been inaccurate and should not be relied on to calculate the CAPM?**

1131 A. A recent paper published in February 2020 by the Federal Reserve Bank of San
1132 Francisco compared the forecasts from Blue Chip and the Federal Reserve (Greenbook)
1133 for various economic indicators. The result was that the forecasts from Blue Chip had
1134 very similar accuracy as those produced by the Federal Reserve. Specifically, the
1135 authors noted that:

1136 [M]arkets aggregate information, and there are very large, liquid
1137 markets in the U.S. that are closely tied to interest rate and
1138 inflation forecasts (such as nominal and real Treasury bonds and
1139 Treasury, interest rate, and inflation futures, options, and swaps),

⁷⁴ Direct Testimony of Casey J. Coleman, at 44.

⁷⁵ Direct Testimony of Casey J. Coleman, at 45.

1140 and these market prices are closely followed by private sector
1141 forecasters.⁷⁶

1142 Given that the Federal Reserve Bank is analyzing the private sector forecasts
1143 summarized by Blue Chip, it is clear that Blue Chip forecasts are highly regarded
1144 among economic and financial experts. In fact, the American Economic Association
1145 states that Blue Chip “may be the best known organization for consensus macro
1146 forecasts.”⁷⁷ Finally, Secretary Mnuchin recently cited Blue Chip’s macroeconomic
1147 forecasts in his statement before the House Committee on Financial Services on June
1148 30, 2020.⁷⁸

1149 **Q. Have you reviewed the articles cited by Mr. Coleman?**

1150 A. Yes, I have. Mr. Coleman cites an article from MarketWatch, which noted that 100
1151 percent of economists in the spring of 2014 expected yields on long-term government
1152 bonds to rise in the second half of 2014, but instead yields decreased.⁷⁹ While
1153 economists may have been incorrect in the spring of 2014 about interest rate
1154 projections, the important factor to consider is whether investors relied on these
1155 projections to make investment decisions. According to MarketWatch, investors did
1156 rely on the projections. In fact, MarketWatch notes:

1157 Then again, the majority of MarketWatch readers weren’t exactly
1158 expecting rates to fall either, judging by an informal survey taken
1159 at the time.⁸⁰

⁷⁶ Bauer, Michael D. and Swanson, Eric T., “The Fed’s Response to Economic News Explains the ‘Fed Information Effect’”, Federal Reserve Bank of San Francisco, Working Paper Series, February 2020, Working Paper 2020-06, at 6, footnote 3.

⁷⁷ American Economic Association, “Resources for Economists on the Internet”, Blue Chip Economic Indicators, available here: https://www.aeaweb.org/rfe/showRes.php?rfe_id=1922&cat_id=12.

⁷⁸ U.S. Department of the Treasury, Statement of Secretary Steven T. Mnuchin Before the House Committee on Financial Services, June 30, 2020.

⁷⁹ Ben Eisen, “Yes, 100% of economists were dead wrong about yields” Market Watch, October 22, 2014.

⁸⁰ *Ibid.*

1160 This is important because in the current proceeding we are trying to determine what
1161 investors expect the cost of capital will be for RMP over the near-term, or the period
1162 that rates will be in effect. By relying on interest rate projections as the estimate of the
1163 risk-free rate in the CAPM, the expectations of investors are effectively being
1164 considered.

1165 The Wall Street Journal article cited by Mr. Coleman discussed why the
1166 recovery from the Great Recession of 2008-09 may have been slower than the
1167 recoveries following past recessions.⁸¹ However, the Wall Street Journal article does
1168 not discuss either investors' expectations, the CAPM, or the appropriate risk-free rate
1169 to use in the CAPM. It is not clear why Mr. Coleman concluded that this article provides
1170 support for his argument against the use of interest rate projections in the CAPM.

1171 **Q. Does Mr. Coleman also rely on forecasted market data in his ROE analysis?**

1172 A. Yes. Mr. Coleman has no objection to the use of forecasted data in his DCF analysis,
1173 where he considers projected EPS growth rates in the Constant Growth DCF model.
1174 Furthermore, as noted above, Mr. Coleman relies on the normalized 20-year U.S.
1175 Treasury bond yield of 2.50 percent as reported by Duff & Phelps as his estimate of the
1176 risk-free rate. Therefore, Mr. Coleman's risk-free rate is higher than the current yields
1177 on long-term government bonds, which would imply that Mr. Coleman also believes
1178 that interest rates will increase. It is unclear why Mr. Coleman finds these inputs
1179 reasonable, and yet suggests that the use of projected Treasury bond yields, such as
1180 those available from Blue Chip Financial Forecasts, should not be considered.

⁸¹ Ip, G. (December 14, 2019) Economists Got the Decade All Wrong. They're Trying to Figure Out Why. Wall Street Journal.

1181 **2. Beta**

1182 **Q. Please summarize the Beta coefficients relied on by Mr. Coleman.**

1183 A. Mr. Coleman relies on four sources for his Beta coefficients: Value Line, Yahoo!
1184 Finance, Zacks, and Ned Davis Research. Value Line reports five-year adjusted Beta
1185 coefficients, while Yahoo! Finance, Zacks and Ned Davis Research all report raw Beta
1186 coefficients, which Mr. Coleman does not adjust to account for the tendency of Beta to
1187 revert to the broader market average of 1.0. As a result, the average Beta coefficient of
1188 0.48 used by Mr. Coleman is well below the average Value Line Beta of approximately
1189 0.57 for his proxy group.⁸²

1190 **Q. What is your concern with the Beta coefficients that Mr. Coleman has relied on?**

1191 A. I have several concerns with the Beta coefficients that Mr. Coleman has relied on to
1192 develop his CAPM analysis. First, Mr. Coleman has relied on the Beta coefficients as
1193 reported by Value Line as of January 31, 2020, which do not include the effects on the
1194 financial markets of COVID-19. As discussed in Section V above, utilities have
1195 traditionally been considered a defensive sector; however, this has not been the case
1196 recently as investors have been concerned with the effects of COVID-19 on the utility
1197 sector. As a result, utilities have traded more like the overall market, which has resulted
1198 in a significant increase in the Beta coefficients for utility stocks. Therefore, Mr.
1199 Coleman's reliance on Value Line's Beta coefficients as of January 31, 2020
1200 significantly understates the Beta coefficient for the proxy group.

1201 Second, Mr. Coleman's Beta coefficient is significantly lower due to his
1202 reliance on the Beta coefficients reported by Zacks, Yahoo! Finance and Ned Davis

⁸² DPU Exhibit 2.04 DIR.

1203 Research. Yahoo! Finance, Zacks and Ned Davis Research calculate the Beta
1204 coefficient using monthly prices for the previous five years relative to the S&P 500
1205 Index. This results in regression analyses that uses only 60 data points for Yahoo!
1206 Finance, Zacks and Ned Davis Research. The reduced number of data points can result
1207 in regression results that are not statistically significant.

1208 Finally, the methodology relied on by Zacks, Yahoo! and Ned Davis Research
1209 is identical. Therefore, as will be discussed in more detail below, the Beta coefficients
1210 reported by Ned Davis Research, Zacks and Yahoo! Finance that Mr. Coleman has
1211 relied on in his CAPM are nearly identical. Effectively, Mr. Coleman has placed triple
1212 the weight on the methodology used by Ned Davis Research, Yahoo! Finance and
1213 Zacks. This is important because to arrive at his proxy group Beta Coefficient of 0.48,
1214 Mr. Coleman calculates the average of the adjusted Beta coefficient from Value Line
1215 and the raw Beta coefficients from Yahoo!, Zacks and Ned Davis Research. This has
1216 the effect of biasing the proxy group average Beta coefficient downwards.

1217 **Q. How do the current Vale Line Beta coefficients compare with the Value Line Beta**
1218 **coefficients that Mr. Coleman has relied on as of January 31, 2020?**

1219 A. As noted above, the current Beta coefficients reported by Value Line have increased
1220 substantially. The average Value Line Beta coefficient for the proxy group that Mr.
1221 Coleman relied on was 0.55, whereas as shown in Exhibit RMP___(AEB-7R),
1222 currently the average Beta coefficient for his proxy group from Value Line is 0.88.⁸³

⁸³ Mr. Coleman indicates that he has relied on the same proxy group that I relied on to develop my direct testimony; however, Mr. Coleman includes CenterPoint Energy, Inc. and FirstEnergy Corporation in his proxy group which were not included in the proxy group that I relied on in my direct testimony. Therefore, I have excluded CenterPoint Energy, Inc. and FirstEnergy Corporation from the proxy group average Beta calculation shown in Exhibit RMP ___ (AEB-7R).

1223 The increase is due to the economic effects of COVID-19. Investors understand that
1224 COVID-19 will affect the business operations of utilities and as such utilities have
1225 traded more like the broader market, which has resulted in an increase in the Beta
1226 coefficients. By relying on Beta coefficients from Value Line from the pre-COVID-19
1227 period, Mr. Coleman has not considered recent changes in market conditions and as a
1228 result has significantly understated the Beta coefficient from Value Line.

1229 **Q. Have you tested the significance of Beta coefficients using 60 monthly data points**
1230 **similar to Yahoo!, Zacks and Ned Davis Research?**

1231 A. Yes. Using Bloomberg, I developed Beta coefficients using the methodology applied
1232 by Yahoo! Finance, Zacks and Ned Davis Research, calculating the Beta coefficient
1233 for each company in the proxy group using monthly returns for the past five years
1234 ending August 31, 2020 relative to the S&P 500 Index. As shown in Figure 10, the R²
1235 for the regression equations ranged from 0.018 to 0.331, which means that the S&P
1236 500 Index explained at most 33 percent of the variation seen in a proxy group
1237 company's return. Additionally, 6 of the 22 Beta coefficients were not statistically
1238 significant at the 95 percent confidence level. It is inappropriate to use Beta
1239 coefficients, as Mr. Coleman has, from regression equations where the coefficients are
1240 not statistically significant at the 95 percent confidence level and the R² is extremely
1241 low.

1242
1243

Figure 10: Yahoo! Finance, Zacks and Ned Davis Research – Beta Coefficient Calculation Summary

Company	Ticker	Adjusted Beta	Raw Beta	Beta Coefficient Significance	Regression R ²
ALLETE, Inc.	ALE	0.528	0.292	0.059	0.060
Alliant Energy Corporation	LNT	0.561	0.342	0.012	0.104
Ameren Corporation	AEE	0.517	0.276	0.033	0.076
American Electric Power Company, Inc.	AEP	0.540	0.310	0.041	0.070
Avista Corporation	AVA	0.587	0.380	0.026	0.083
CMS Energy Corporation	CMS	0.427	0.141	0.308	0.018
Dominion Resources, Inc.	D	0.585	0.377	0.003	0.140
DTE Energy Company	DTE	0.742	0.613	0.000	0.298
Duke Energy Corporation	DUK	0.519	0.278	0.046	0.067
Entergy Corporation	ETR	0.672	0.509	0.002	0.156
Evergy, Inc.	EVRG	0.583	0.375	0.028	0.080
IDACORP, Inc.	IDA	0.588	0.382	0.007	0.119
NextEra Energy, Inc.	NEE	0.473	0.209	0.143	0.037
NorthWestern Corporation	NWE	0.517	0.276	0.078	0.053
OGE Energy Corporation	OGE	0.786	0.679	0.000	0.276
Otter Tail Corporation	OTTR	0.546	0.319	0.041	0.070
Pinnacle West Capital Corporation	PNW	0.515	0.272	0.090	0.049
PNM Resources, Inc.	PNM	0.708	0.562	0.002	0.160
Portland General Electric Company	POR	0.481	0.222	0.151	0.035
PPL Corporation	PPL	0.846	0.770	0.000	0.331
Southern Company	SO	0.596	0.394	0.010	0.108
Xcel Energy Inc.	XEL	0.516	0.274	0.042	0.069

1244 **Q. Do you have any other concerns with the Beta coefficients relied on by Mr.**
1245 **Coleman?**

1246 A. Yes. As discussed above, Yahoo! Finance, Zacks and Ned Davis Research calculate
1247 raw Beta coefficients using monthly returns for the past five years relative to the S&P
1248 500 Index. The methodology is identical between the three sources. Therefore, as
1249 shown in Figure 11, the Beta coefficients reported by Ned Davis Research, Zacks and

1250 Yahoo! Finance that Mr. Coleman has relied on in his CAPM are nearly identical. Since
1251 he has triple counted the methodology of Ned Davis Research, Zacks and Yahoo! in
1252 his mean calculation, Mr. Coleman's proxy group Beta coefficient is biased downwards
1253 towards the mean Beta coefficient for the proxy group from Yahoo!, Zacks and Ned
1254 Davis Research. As shown in DPU Exhibit 2.04 DIR, the mean for the proxy group is
1255 0.48, while the mean Beta coefficients for the proxy group from Zacks, Yahoo! and
1256 Ned Davis Research are 0.45, 0.44 and 0.43, respectively. Thus, the approach applied
1257 by Mr. Coleman is inappropriate.

1258
1259

Figure 11: Comparison of Yahoo! Finance, Zacks and Ned Davis Research Raw Beta Coefficients

Company	Ticker	Yahoo! Finance	Zacks	Ned Davis Research
ALLETE, Inc.	ALE	0.32	0.34	0.35
Alliant Energy Corporation	LNT	0.36	0.42	0.38
Ameren Corporation	AEE	0.27	0.30	0.29
American Electric Power Company, Inc.	AEP	0.37	0.38	0.39
Avista Corporation	AVA	0.42	0.41	0.48
CMS Energy Corporation	CMS	NA	0.21	0.21
Dominion Resources, Inc.	D	0.43	0.40	0.45
DTE Energy Company	DTE	0.61	0.60	0.62
Duke Energy Corporation	DUK	0.32	0.32	0.35
Entergy Corporation	ETR	0.56	0.59	0.58
Evergy, Inc.	EVRG	0.48	0.49	0.51
IDACORP, Inc.	IDA	0.43	0.43	0.45
NextEra Energy, Inc.	NEE	0.22	0.26	0.24
NorthWestern Corporation	NWE	0.35	0.33	0.37
OGE Energy Corporation	OGE	0.71	0.76	0.73
Otter Tail Corporation	OTTR	0.33	0.31	NA
Pinnacle West Capital Corporation	PNW	0.32	0.38	0.35
PNM Resources, Inc.	PNM	0.55	0.58	NA
Portland General Electric Company	POR	0.32	0.31	0.34
PPL Corporation	PPL	0.76	0.73	0.79
Southern Company	SO	0.43	0.42	0.45
Xcel Energy Inc.	XEL	0.27	0.29	0.29

1260 **Q. Have you revised Mr. Coleman's Beta coefficient to reflect the changes you have**

1261 **outlined?**

1262 A. Yes. First, I adjusted Mr. Coleman's calculation of the proxy group average Beta

1263 coefficient to rely on the most recent Value Line reports for the electric utilities

1264 contained in Mr. Coleman's proxy group. Then, the correct approach for relying on the

1265 Beta coefficients reported by Yahoo!/Zacks/Ned Davis, would be to average the Beta

1266 coefficients from Yahoo!, Zacks, and Ned Davis Research so as to provide equal weight

1267 to the methodologies used by Value Line and Yahoo!/Zacks/Ned Davis. Finally, to
1268 account for the fact that Betas trend towards 1.00 over time, it would be necessary to
1269 adjust the average raw Beta coefficients from Yahoo!, Zacks, and Ned Davis Research
1270 using the formula provided by Value Line. These adjusted Betas would then be
1271 averaged with the adjusted Beta coefficients from Value Line.

1272 **Q. What are the results of your recalculated Beta coefficients?**

1273 A. As shown in Exhibit RMP ___ (AEB-8R), this would have resulted in a mean adjusted
1274 proxy group Beta coefficient of 0.74.⁸⁴ This adjusted proxy group average Beta
1275 coefficient is well above the proxy group average of 0.48 relied on by Mr. Coleman.

1276 **Q. What Beta coefficient should be relied on in the CAPM?**

1277 A. I continue to support the use of the average Beta coefficients for the proxy group
1278 companies as reported by Value Line and Bloomberg. As discussed in my direct
1279 testimony, Value Line calculates the Beta coefficient for each company using five years
1280 of weekly returns relative to the New York Stock Exchange Composite Index while
1281 Bloomberg's Beta coefficients were calculated using ten years of weekly returns
1282 relative to the S&P 500 Index.⁸⁵ The number of additional data points as a result of
1283 using weekly, as opposed to monthly, returns results in a more robust estimate of the
1284 Beta coefficient. Moreover, as will be discussed below, Dr. Woolridge also relied on
1285 the Beta coefficients reported by Value Line. Therefore, I conclude that it is more
1286 appropriate to rely on the Beta coefficients reported by Value Line and Bloomberg as

⁸⁴ Mr. Coleman indicates that he has relied on the same proxy group that I relied on to develop my direct testimony; however, Mr. Coleman includes CenterPoint Energy, Inc. and FirstEnergy Corporation in his proxy group which were not included in the proxy group that I relied on in my direct testimony. Therefore, I have excluded CenterPoint Energy, Inc. and FirstEnergy Corporation from the proxy group average Beta calculation shown in Exhibit RMP ___ (AEB-8R).

⁸⁵ Direct Testimony of Ann. E. Bulkley, at 52.

1287 opposed to including, as Mr. Coleman has, the Beta coefficients from Yahoo! Finance,
1288 Zacks and Ned Davis Research.

1289 **3. Market Risk Premium**

1290 **Q. Please discuss the market risk premium used by Mr. Coleman.**

1291 A. Mr. Coleman relies on two different estimates of the market risk premium (“MRP”) in
1292 his CAPM analysis. The first is the recommended equity risk premium from Duff &
1293 Phelps of 6.00 percent and the second is the average historical market risk premium as
1294 calculated by Dr. Damodaran of 5.43 percent.⁸⁶

1295 **Q. What is your concern with Mr. Coleman’s market risk premium estimates?**

1296 A. The equity risk premiums used by Mr. Coleman fail to reflect the inverse relationship
1297 between interest rates and the market risk premium. That is, as interest rates decrease,
1298 the market risk premium increases. Based on historical data from Duff & Phelps, the
1299 market risk premium from 1926-2019 is 7.15 percent.⁸⁷ The historical income-only
1300 return on government bonds used to calculate the historical MRP over the same period
1301 has been approximately 4.94 percent, while the current 30-day average risk-free rate
1302 on long-term government bonds is 1.34 percent. Because interest rates on long-term
1303 government bonds are well below the historical average of 4.94 percent, the inverse
1304 relationship between interest rates and the MRP implies that the MRP should be well
1305 above the long-term historical average of 7.15 percent. However, the MRPs used by
1306 Mr. Coleman of 6.00 percent and 5.43 percent suggest that the expected market risk

⁸⁶ Direct Testimony of Casey J. Coleman, at 40-41.

⁸⁷ The market risk premium from 1926-2019 is calculated as the average return on large company stocks from 1926-2019 minus the average income only return on long-term government bonds from 1926-2019 (i.e., 12.09 percent – 4.94 percent = 7.15 percent). Source: Duff & Phelps, Valuation Handbook: Guide to Cost of Capital, 2020, CRSP Deciles Size Study – Supplementary Data Exhibits.

1307 premium would be 115 basis points and 172 basis points, respectively, lower than the
1308 historical average MRP of 7.15 percent.

1309 **Q. Do you have any other concerns with the MRPs that Mr. Coleman has relied on**
1310 **in his CAPM analysis?**

1311 A. Yes. The market return relied upon in Mr. Coleman's CAPM is not consistent with the
1312 results of his DCF analyses. As shown in DPU Exhibit 2.06 DIR, Mr. Coleman relied
1313 on the implied market return from Duff & Phelps of 8.50 percent, and Dr. Damodaran
1314 of 8.91 percent. These estimates of the overall return on the market are inconsistent
1315 with the results produced by Mr. Coleman's Constant Growth DCF analysis. As Mr.
1316 Coleman notes, the Constant Growth DCF results for his proxy group of electric
1317 utilities are 9.17 percent and 8.91 percent. Mr. Coleman has acknowledged that his
1318 proxy group is less risky than the market by relying on a Beta coefficient of 0.48 in his
1319 CAPM analysis. Therefore, the market returns that Mr. Coleman relies on in developing
1320 the MRP should be significantly higher than his Constant Growth DCF results for a
1321 group of electric utilities. However, the returns on the overall market, relied on by Mr.
1322 Coleman to develop his market risk premium are either equivalent to or less than his
1323 Constant Growth DCF results for a proxy group of electric utilities. This highlights an
1324 important inconsistency that the Commission should consider between the inputs used
1325 to calculate Mr. Coleman's CAPM analysis and his Constant Growth DCF analysis.

1326 **Q. What is Mr. Coleman's concern with the MRP you have used in your CAPM**
1327 **analysis?**

1328 A. Mr. Coleman contends that the methodology I have used to estimate the MRP has not
1329 been accepted by the Commission in any other rate case nor has it been published in a

1330 journal or academic publication.⁸⁸ In addition, Mr. Coleman provides citations to
1331 financial literature which he claims support an MRP close to 5.00 percent. Because the
1332 MRPs that I rely on in my CAPM analysis are greater than the “general consensus of
1333 financial professionals,” Mr. Coleman concludes that my MRPs are not reasonable.⁸⁹

1334 **Q. What is your response to Mr. Coleman’s concerns about your forward-looking**
1335 **MRP?**

1336 A. While Mr. Coleman indicates that the methodology that I use to calculate the MRP in
1337 my CAPM analysis has not been accepted by the Commission in any other rate case or
1338 published in any journal or academic publication, he has not acknowledged the
1339 information that I provided in response to DPU Data Request 2.1 which he notes he has
1340 reviewed in his response to RMP Discovery Request No 1.9. As discussed in DPU Data
1341 Request 2.1, while I developed the estimate of the market return, the process I used to
1342 estimate the market return relies on data published by S&P and a prominent cost of
1343 equity model, the Constant Growth DCF. As noted in DPU Data Request 2.1, the use
1344 of the Constant Growth DCF model to estimate the return for the market has been relied
1345 on in academic research and by several regulatory commissions. For example, Robert
1346 S. Harris and Felicia Marston, used the Constant Growth DCF model including
1347 analysts’ earnings growth forecasts as the estimate of growth in the model to estimate
1348 the market return in their article “Changes in the Market Risk Premium and the Cost of
1349 Capital: Implication for Practice.”⁹⁰ Similarly, in addition to the Maine Public Utilities

⁸⁸ Direct Testimony of Casey J. Coleman, at 43.

⁸⁹ Direct Testimony of Casey J. Coleman, at 46.

⁹⁰ Harris, R. and F. Marston, 2013, “Changes in the Market Risk Premium and the Cost of Capital: Implications for Practice,” *Journal of Applied Finance* (No. 1).

1350 Commission which I reference in my direct testimony,⁹¹ the Federal Energy Regulatory
1351 Commission (“FERC”), and the Minnesota Public Utilities Commission (“Minnesota
1352 PUC”) have also relied on the Constant Growth DCF model to estimate the market
1353 return. In Opinion No. 569-A, the FERC continued to support the use of the Constant
1354 Growth DCF model to calculate the market return for the CAPM noting:

1355 [w]e also continue to find that the CAPM should use a one-step
1356 DCF for its risk premium. This is because the rationale for using
1357 a two-step DCF methodology for a specific group of utilities does
1358 not apply when conducting a DCF study of the dividend-paying
1359 companies in the S&P 500, as the Commission found in Opinion
1360 Nos. 531-B and 569.172 A long-term component is unnecessary
1361 because of the regular updates to the S&P 500, which allows it to
1362 continue to grow at a short-term growth rate and because S&P 500
1363 companies include stocks that are both new and mature, the latter
1364 of which have a moderating effect on the short-term growth
1365 rates.⁹²

1366 Additionally, in Docket No. G-004/GR-19-511 for Great Plains Natural Gas Company,
1367 the Department of Commerce in Minnesota (“Minnesota DOC”) relied on a Constant
1368 Growth DCF analysis for the S&P 500 to estimate the market return for the CAPM.
1369 Specifically the Minnesota DOC relied on the dividend yield reported by S&P for the
1370 S&P 500 and the three-five year earnings growth estimate for the State Street Global
1371 Advisors S&P 500 exchange traded fund (“ETF”) which resulted in a market return of
1372 13.44 percent.⁹³ The Minnesota DOC has historically relied on the Constant Growth
1373 DCF model to estimate the market return for the CAPM, which has in turn been
1374 considered by the Minnesota PUC in prior proceedings.⁹⁴

⁹¹ Direct Testimony of Ann E. Bulkley, at 52-53.

⁹² FERC Docket No. EL-14-12-004, Opinion No. 569-A (May 21, 2020), at para. 85.

⁹³ Docket No. G-004/GR-19-511, In the Matter of the Petition By Great Plains Natural Gas Co., a Division of Montana-Dakota Utilities Co., for Authority to Increase Natural Gas Rates in Minnesota (March 3, 2020), at Ex. DER-9, CMA-S-8.

⁹⁴ See Docket No. E017/GR-15-1033, Findings of Fact, Conclusions and Order, May 1, 2017, at 54-56; and Docket No. E015/GR-16-664, Findings of Fact, Conclusions and Order, March 12, 2018, at 60-61.

1375 **Q. How does your forward-looking market return estimate compare to recent**
1376 **historical returns for Large Company Stocks?**

1377 A. As provided in the response to DPU Data Request 2.1 and shown in Figure 12 below,
1378 my estimate of the market return of 14.05 percent is lower than the actual average
1379 market return for Large Company Stocks from 2009 to 2019 (i.e., the period for the
1380 Great Recession of 2008/09) of 15.27 percent as reported by Duff & Phelps.
1381 Furthermore, the market return estimates of 8.50 percent and 8.91 percent relied on by
1382 Mr. Coleman are well below the average return achieved by Large Company Stocks
1383 from 2009 to 2019.

1384 **Figure 12: Duff and Phelps – Total Return for Large Company Stocks – 2009-2019⁹⁵**

Year	Large Company Stock
2009	26.46%
2010	15.06%
2011	2.11%
2012	16.00%
2013	32.39%
2014	13.69%
2015	1.38%
2016	11.96%
2017	21.83%
2018	-4.38%
2019	31.49%
Average	15.27%

1385 **Q. What is your conclusion regarding Mr. Coleman’s CAPM analysis?**

1386 A. The results of Mr. Coleman’s CAPM analysis are substantially lower than recent
1387 authorized ROEs for electric utilities, primarily due to his reliance on raw Beta
1388 coefficients from Yahoo!, Zacks and Ned Davis Research, which places primary wight

⁹⁵ Source: Duff and Phelps, Cost of Capital Navigator.

1389 on the results of a methodology to calculate Beta that does not produce statistically
1390 significant results and his reliance on the market risk premia from Duff & Phelps and
1391 Dr. Damodaran, which do not reflect the inverse relationship between the MRP and
1392 interest rates and therefore vastly understates the expected forward-looking MRP of
1393 investors. These assumptions significantly understate the ROE as estimated by the
1394 CAPM. As discussed above, the ROE that is being set in this case is intended to be
1395 forward-looking. Therefore, it is appropriate that the CAPM reflect forward-looking
1396 market conditions. As a result, I continue to support the inputs and assumptions that I
1397 relied on in my direct testimony to estimate the CAPM.

1398 **E. Risk Premium**

1399 **Q. Please summarize Mr. Coleman's Risk Premium analysis.**

1400 A. In addition to his CAPM analysis, Mr. Coleman performs two additional Risk Premium
1401 analyses to estimate RMP's cost of equity. Mr. Coleman's first approach calculates the
1402 equity risk premium by taking the difference between the market return of 8.50 percent
1403 as reported by Duff & Phelps and the yields on Moody's Aaa-rated and Baa-rated
1404 corporate bonds. The resulting equity risk premia are then added to the interest rate on
1405 RMP's most recent long-term bond issuance of 3.30 percent. This produces risk
1406 premium results of 9.36 percent using the Moody's Aaa-rated corporate bond yield and
1407 8.34 percent using the Moody's Baa-rate bond yield.⁹⁶

1408 Similarly, Mr. Coleman's second approach calculates the equity risk premium by
1409 taking the difference between the market return of 8.91 percent as calculated by Dr.
1410 Damodaran and the yields on the Moody's Aaa-rated and Baa-rated corporate bonds.

⁹⁶ Direct Testimony of Casey J. Coleman, at 47.

1411 The resulting equity risk premia are then added to the interest rate on RMP's most
1412 recent long-term bond issuance of 3.30 percent. This produces risk premium results of
1413 9.77 percent using the Moody's Aaa-rated corporate bond yield and 8.75 percent using
1414 the Moody's Baa-rated bond yield.⁹⁷ Mr. Coleman then calculates the mid-point of his
1415 analyses using the Moody's Aaa-rated and Baa-rated corporate bonds yields to
1416 approximate the result for an A-rated company like RMP. This resulted in an ROE of
1417 9.06 percent.⁹⁸

1418 **Q. What are your specific concerns with Mr. Coleman's Risk Premium analyses?**

1419 A. Mr. Coleman relies on the implied market return from Duff & Phelps of 8.50 percent
1420 and the implied market return from Dr. Damodaran of 8.91 percent. As shown in Figure
1421 12 above, both market returns are well below the actual average market return for Large
1422 Company Stocks from 2009 to 2019. Furthermore, Mr. Coleman's risk premium result
1423 of 9.06 percent is greater than the market return estimates of 8.50 percent and 8.91
1424 percent. However, Mr. Coleman has relied on Beta coefficients that are substantially
1425 less than 1.00 in his CAPM analysis. Therefore, Mr. Coleman's CAPM analysis implies
1426 that the market return should be greater than the return estimated for a utility such as
1427 RMP. Thus, in addition to the support provided by the results of Mr. Coleman's DCF
1428 analysis, Mr. Coleman's risk premium result provides further support for the fact that
1429 markets returns of 8.50 percent and 8.91 percent are unreasonably low and understate
1430 the true market return expected by investors. By relying on unreasonably low market
1431 returns, Mr. Coleman's understates the results of his risk premium analysis.

⁹⁷ Direct Testimony of Casey J. Coleman, at 48.

⁹⁸ Direct Testimony of Casey J. Coleman, at 48.

1432 Furthermore, Mr. Coleman relies on the yields on the Moody's Aaa-rated and
1433 Baa-rated corporate bonds to approximate the bond rating of RMP. However, since the
1434 Company is a utility and has a credit rating from Moody's of A3, it would be more
1435 appropriate to rely on the Moody's A-rated utility bond yields to calculate the risk
1436 premium.

1437 Finally, Mr. Coleman adds the estimated risk premia to the interest rate from
1438 RMP's most recent long-term debt issuance. However, as noted in Section V, long-
1439 term interest rates are expected to increase over the near-term. Therefore, a risk
1440 premium analysis based on current interest rates is likely to understate the cost of equity
1441 during the period that RMP's rate will be in effect.

1442 **Q. What is your conclusion regarding the risk premium analysis conducted by Mr.**
1443 **Coleman?**

1444 **A.** While I agree with Mr. Coleman that it is important to consider the risk premium
1445 analysis, I disagree with the inputs that Mr. Coleman has selected to develop his risk
1446 premium analysis. Mr. Coleman's use of current interest rates and the market return
1447 estimates from Duff & Phelps and Dr. Damodaran causes the results of Mr. Coleman's
1448 risk premium analysis to be understated. As with the DCF and CAPM models, the
1449 selection of inputs in the risk premium is important to ensure the model is producing
1450 reasonable results. In the case of the risk premium model, this involves careful
1451 consideration of the selection of the interest rate and risk premium. As discussed in my
1452 direct testimony, I developed a regression analysis that estimates a relationship between
1453 interest rates and the risk premia over time.⁹⁹ The regression results can then be used

⁹⁹ Direct Testimony of Ann E. Bulkley, at 56.

1454 to estimate the risk premium given a specified interest rate. Therefore, projected
1455 interest rates can be relied on in the regression equation to develop an estimate of the
1456 projected risk premium. This results in a statistically significant estimate of the ROE
1457 during the time period that RMP's rates will be in effect. As a result, I believe it is more
1458 appropriate to rely on this time series analysis of the electric utility segment than Mr.
1459 Coleman's estimated ROE based on current interest rates and market returns that are
1460 less than the current ROEs being authorized for electric utilities.

1461 **F. Expected Earnings**

1462 **Q. Please summarize Mr. Coleman's criticisms of your Expected Earnings analysis.**

1463 A. Mr. Coleman contends that his biggest concern with my Expected Earnings analysis is
1464 that the approach is not market based but is instead an accounting-based approach.¹⁰⁰
1465 According to Mr. Coleman, investors cannot invest in a company's book value but must
1466 instead pay the market price of a company. Therefore, the expected return on book
1467 equity is not reflective of returns on other available investments since the book value
1468 of investments is not available to investors outside of the unlikely scenario where
1469 market and book value are equal.¹⁰¹ Additionally, Mr. Coleman states that the
1470 simplicity of the approach results in the Expected Earnings model not being reflective
1471 of a utility's cost of equity. Given that the Expected Earnings analysis is not market
1472 based and does not reflect a utility's cost of equity, Mr. Coleman recommends that the
1473 Commission not rely on the approach to estimate the cost of equity for RMP.

¹⁰⁰ Direct Testimony of Casey J. Coleman, at 34.

¹⁰¹ *Ibid.*

1474 **Q. Do you agree with Mr. Coleman’s position on this issue?**

1475 A. No, I do not. The *Hope* and *Bluefield* standards establish that a utility should be granted
1476 the opportunity to earn a return that is commensurate with the return on other
1477 investments of similar risk. Therefore, it is reasonable to consider the returns that
1478 investors expect to earn on the common equity of the electric utility companies in the
1479 proxy group as a benchmark for a just and reasonable return because that is the expected
1480 earned return on equity that an investor will consider in determining whether to
1481 purchase shares in the company or to seek alternative investments with a better
1482 risk/reward profile. As Dr. Morin notes:

1483 The Comparable Earnings standard has a long and rich history in
1484 regulatory proceedings, and finds its origins in the fair return
1485 doctrine enunciated by the U.S. Supreme Court in the landmark
1486 *Hope* case. The governing principle for setting a fair return
1487 decreed in *Hope* is that the allowable return on equity should be
1488 commensurate with returns on investments in other firms having
1489 comparable risks, and that the allowed return should be sufficient
1490 to assure confidence in the financial integrity of the firm, in order
1491 to maintain creditworthiness and ability to attract capital on
1492 reasonable terms. Two distinct standards emerge from this basic
1493 premise: a standard of Capital Attraction and a standard of
1494 Comparable Earnings. The Capital Attraction standard focuses on
1495 investors’ return requirements, and is applied through market
1496 value methods described in prior chapters, such as DCF, CAPM,
1497 or Risk Premium. The Comparable Earnings standard uses the
1498 return earned on book equity investment by enterprises of
1499 comparable risks as the measure of fair return.¹⁰²

1500 What Mr. Coleman fails to note in his critique of the Expected Earnings analysis is that
1501 the ROE that is established in this case will be applied to the net book value of the
1502 Company’s rate base (subject to certain regulatory adjustments). In this regard, the
1503 Expected Earnings approach provides valuable insight into the opportunity cost of

¹⁰² New Regulatory Finance, Roger A. Morin Ph.D., Public Utility Reports, 2006, at 381.

1504 investing in RMP. If investors devote capital to the Company (which would offer a
1505 return of only 9.25 percent on book value if Mr. Coleman's recommendation were
1506 adopted), they forgo the opportunity for that same capital to earn a potentially greater
1507 return on book value through investment in the proxy companies. As a result, the
1508 Expected Earnings approach is informative because it provides a measure of the return
1509 on book value that is available to investors through other investments with comparable
1510 risk to RMP.

1511 **Q. Please comment on Mr. Coleman's references to Dr. Morin's statements in *New***
1512 ***Regulatory Finance* as it pertains to the Expected Earnings analysis.**

1513 A. Mr. Coleman references Dr. Morin, who does discuss some of the weaknesses of the
1514 Expected Earnings analysis. However, in *New Regulatory Finance*, Dr. Morin
1515 discusses the strengths and weaknesses of each of the methodologies used to compute
1516 the cost of equity including the DCF and CAPM analyses. Additionally, Mr. Coleman
1517 fails to mention Dr. Morin's conclusion regarding the Expected Earnings analysis.
1518 Specifically, Dr. Morin stated:

1519 The Comparable Earnings approach is far more meaningful in the
1520 regulatory arena than in the sphere of competitive firms. Unlike
1521 industrial companies the earnings requirement of utilities is
1522 determined by applying a percentage rate of return to the book
1523 value of a utility's investment, and not on the market value of that
1524 investment. Therefore, it stands to reason that a different
1525 percentage rate of return than the market cost of capital be applied
1526 when the investment base is stated in book value terms rather than
1527 market value terms. In a competitive market, investment decisions
1528 are taken on the basis of market prices, market values, and market
1529 cost of capital. **If regulation's role was to duplicate the**
1530 **competitive result perfectly, then the market cost of capital**
1531 **would be applied to the current market value of rate base**
1532 **assets employed by utilities to provide service. But because the**
1533 **investment base for ratemaking purposes is expressed in book**

1534 **value terms, a rate of return on book value, as is the case with**
1535 **Comparable Earnings, is highly meaningful.**¹⁰³

1536 Therefore, contrary to the position of Mr. Coleman, Dr. Morin believes that the
1537 Expected Earnings approach is highly meaningful in a regulatory setting similar to the
1538 one being used to set the cost of equity for RMP.

1539 **G. Business Risks**

1540 **Q. What are Mr. Coleman’s concerns with the business risks you considered in**
1541 **developing the ROE for RMP?**

1542 A. Mr. Coleman contends that my risk analysis does not demonstrate that the Company
1543 has higher business and regulatory risk than the companies in my proxy group. In
1544 particular, Mr. Coleman argues that RMP does not have greater risk than the proxy
1545 group due to its capital expenditures plan because the Company should be pursuing
1546 long-term projects since capital costs are low and the Company like 48 percent of the
1547 proxy group does not recover capital costs through a capital tracking mechanism.¹⁰⁴
1548 Furthermore, Mr. Coleman states that I have not provided enough support to conclude
1549 that RMP has greater risk relative to the proxy group as a result of the regulatory
1550 environment in Utah.¹⁰⁵ Mr. Coleman also asserts that the additional business risks of
1551 a vertically integrated utility should be considered in the equity ratio and not the
1552 ROE.¹⁰⁶ In regards to the legislation enacted in Oregon, Wyoming and Washington
1553 related to RMP’s coal-fired power plants, Mr. Coleman believes the appropriate
1554 proceeding to deal with these issues is the Company’s IRP filing.¹⁰⁷ Moreover, the

¹⁰³ New Regulatory Finance, Roger A. Morin Ph.D., Public Utility Reports, 2006, at 394-395. (emphasis added).

¹⁰⁴ Direct Testimony of Casey J. Coleman, at 55-56.

¹⁰⁵ Direct Testimony of Casey J. Coleman, at 58.

¹⁰⁶ Direct Testimony of Casey J. Coleman, at 59.

¹⁰⁷ Direct Testimony of Casey J. Coleman, at 59-60.

1555 Commission should not increase the ROE in Utah based on the decisions made in
1556 Oregon and Wyoming. Finally, as it pertains Utah House Bill 411, Mr. Coleman
1557 believes that it is too soon to know the effect this will have on RMP.¹⁰⁸

1558 **Q. Do you agree with Mr. Coleman’s conclusions regarding the business risks**
1559 **considered in your direct testimony?**

1560 A. No, I do not. As discussed in my direct testimony, RMP has higher business risk than
1561 the proxy group based on several factors that are important to investors. Specifically,
1562 unlike many electric utilities in the proxy group, RMP does not have a capital cost
1563 recovery mechanism. In fact, Mr. Coleman stated as it relates to the capital cost
1564 recovery mechanism that RMP is “not that much riskier” than the proxy group.¹⁰⁹
1565 Therefore, Mr. Coleman acknowledges that not having a capital cost recovery
1566 mechanism does increase RMP’s risk relative to the group.

1567 In terms of regulatory risk, Mr. Coleman referenced RRA who noted that utilities in
1568 Utah benefit from a balanced regulatory approach.¹¹⁰ However, Mr. Coleman fails to
1569 acknowledge that in March 2020, RRA downgraded Utah’s regulatory ranking based
1570 in part on the Commission’s decision for DEU in Docket No. 19-057-02, which RRA
1571 noted included a below average authorized ROE of 9.50 percent. Therefore, also
1572 considering that, as shown in Exhibit RMP___(AEB-10), RMP has fewer cost recovery
1573 mechanisms than the proxy group, is it reasonable to conclude that RMP has greater
1574 regulatory risk than the proxy group.

¹⁰⁸ Direct Testimony of Casey J. Coleman, at 60.

¹⁰⁹ Direct Testimony of Casey J. Coleman, at 56.

¹¹⁰ Direct Testimony of Casey J. Coleman, at 57-58.

1575 Finally, while I agree with Mr. Coleman that the effects on RMP of Utah House Bill
1576 411 are not known at this time, it is the fact that the effects are unknown that increases
1577 the cost of equity for RMP. Utah House Bill 411, as well as the legislation enacted in
1578 Oregon, Washington and Wyoming, increases uncertainty for the Company over the
1579 near-term. Investors view increases in uncertainty as increasing a company's risk and
1580 thus its cost of equity. As such, I have taken this factor, as well as the Company's
1581 capital expenditure plan and regulatory risk, into consideration in selecting the
1582 recommended ROE for the Company from within the range of reasonable results.

1583 **Q. Has Mr. Coleman presented any evidence or conducted any analysis to compare**
1584 **the business risks of RMP to the companies in the proxy group?**

1585 A. No. Mr. Coleman notes that investors and credit rating agencies see RMP's affiliation
1586 with BHE as a positive, which Mr. Coleman contends results in the Company
1587 maintaining access to capital markets at lower capital costs than the costs achieved by
1588 other comparable investments.¹¹¹ Additionally, Mr. Coleman notes that BHE is not
1589 requiring RMP to pay dividends over the near-term so that the Company can use the
1590 retained earnings to fund capital investments while the companies in the proxy group
1591 need to continue to pay dividends. According to Mr. Coleman, the flexibility to pay
1592 dividends provides RMP with a benefit that the companies in the proxy group do not
1593 have. Finally, Mr. Coleman indicates that Utah had one of the better state economies
1594 in the U.S. prior to the COVID-19 pandemic; therefore, because RMP operates in Utah
1595 the Company's prospects for growth are greater than the regulated electric utilities in

¹¹¹ Direct Testimony of Casey J. Coleman, at 61-62.

1596 the proxy group that operate in other jurisdictions.¹¹² Thus, Mr. Coleman concludes
1597 that RMP has less risk than the companies in the proxy group.

1598 **Q. What are your concerns with the business risks considered by Mr. Coleman?**

1599 A. Mr. Coleman notes that he considered the fact that RMP is a wholly-owned subsidiary
1600 of BHE, the Company's flexibility regarding paying dividends and the local economy
1601 to conclude that RMP has less risk compared to the proxy group. However, Mr.
1602 Coleman did not review these factors for the individual companies contained in the
1603 proxy group. For example, he has not specifically developed an analysis to determine
1604 how the economy in RMP's service territory in Utah compares to the economies of the
1605 service territories of the companies in the proxy group. Absent this comparison. There
1606 is no basis to conclude that RMP has less risk.

1607 Furthermore, the stand-alone principle of ratemaking holds that regulated rates
1608 should be based on the risks and benefits of the regulated utility, not its investors, parent
1609 or affiliates.¹¹³ Since the stand-alone principle requires that the RMP's authorized cost
1610 of capital be based on the business and financial risk of the Company individually, it is
1611 necessary to establish a group of companies that are both publicly traded and
1612 comparable to RMP in certain fundamental business and financial respects to serve as
1613 a "proxy" for determining the ROE. Mr. Coleman's consideration of the investor's
1614 views of BHE should not be considered in determining the ROE. The ROE for RMP
1615 should be based on the financial and business risk of RMP as a stand-alone entity. Mr.
1616 Coleman's conclusion that RMP has less risk than the proxy group as a result of the
1617 Company's affiliation with BHE is not appropriate.

¹¹² Direct Testimony of Casey J. Coleman, at 62-63.

¹¹³ New Regulatory Finance, Roger A. Morin Ph.D., Public Utility Reports, 2006, at 215-216.

1618 **Q. Has the Commission considered business risk when determining the appropriate**
1619 **ROE?**

1620 A. Yes. In Docket No. 13-057-05 for DEU, the Commission considered the recent
1621 regulatory mechanisms approved by the Commission for DEU to determine DEU's
1622 relative risk to the proxy group.¹¹⁴ This is similar to the regulatory risk analysis I
1623 performed in Exhibit RMP ____ (AEB-10). Specifically, the Commission noted:

1624 Based on the evidence presented, we do not believe Questar has a
1625 higher risk profile than comparable natural distribution companies
1626 and may, in some instances, have a lower risk profile. We further
1627 acknowledge the regulatory mechanisms approved by this
1628 Commission in recent years have positively affected Questar's
1629 risk profile. For example, the decoupling mechanism, approved on
1630 October 5, 2006, through the Conservation Enabling Tariff in
1631 Docket No. 05-057-T01, ensures Questar collects the authorized
1632 revenue per customer regardless of the weather, the economy,
1633 customer conservation, movement of customers between rate
1634 schedules, or other influences on consumer demand. The
1635 Commission also approved a Demand Side Management cost
1636 balancing account in that docket, which further reduced cost
1637 recovery risk and, ceteris paribus, stabilized earnings.

1638 Additionally, the infrastructure tracker pilot program approved on
1639 June 3, 2010, in Docket No. 09-057-16 allows Questar to begin
1640 recovery of investment associated with high-pressure feeder lines
1641 between rate cases, thus reducing regulatory lag and cost recovery
1642 risk, and stabilizing earnings. The Commission also approved
1643 deferred accounting for transmission and distribution pipeline
1644 integrity management costs in Docket Nos. 04-057-0374 and 09-
1645 057-16, respectively, which again reduced cost recovery risk. The
1646 reduction of Questar's risks resulting from these mechanisms is
1647 evidenced by the reports from the financial rating agencies
1648 described above. We view these reports as positive outcomes
1649 associated with a constructive regulatory framework and a well-
1650 managed utility.¹¹⁵

¹¹⁴ Report and Order, Docket No. 13-057-05, Questar Gas Company, February 21, 2014, at 33.

¹¹⁵ *Ibid.*

1651 While the Commission determined that the regulatory mechanisms in that case reduced
1652 the risk of DEU, the important fact is that the Commission considered the effect the
1653 mechanisms have on the risk of a company. As shown in Exhibit RMP____(AEB-10),
1654 RMP has fewer cost recovery mechanisms when compared to the proxy group, which
1655 would indicate greater risk and thus an ROE toward the higher-end of the range of
1656 results.

1657 VII. RESPONSE TO OCS WITNESS DR. WOOLRIDGE

1658 **Q. Please summarize Dr. Woolridge's testimony and recommendations.**

1659 A. Dr. Woolridge develops a range of results from 7.60 percent to 8.95 percent based on
1660 the results of the Constant Growth DCF and CAPM methods for both his and my proxy
1661 groups. He recommends an ROE for RMP of 9.00 percent, if the Commission approves
1662 his imputed capital structure with an equity ratio of 50.00 percent. Alternatively, Dr.
1663 Woolridge recommends an authorized ROE of 8.75 percent, if the Commission adopts
1664 the Company's proposed capital structure, which includes an equity component of
1665 53.67 percent. His Constant Growth DCF results are based on a dividend yield of 3.60
1666 percent and a growth rate of 5.00 percent for his Electric proxy group. Dr. Woolridge
1667 indicates that his DCF results consider historical earnings growth rates, historical and
1668 projected dividend and book value growth rates, and retention growth rates, as well as
1669 projected earnings growth rates from Value Line, Yahoo, and Zack's, with a primary
1670 weight on the projected earnings growth rates.¹¹⁶ Dr. Woolridge also presents a CAPM
1671 analysis, which produces an ROE estimate of 7.60 percent for both Woolridge's
1672 Electric proxy group and my proxy group. Dr. Woolridge recommends an imputed

¹¹⁶ Direct Testimony of Dr. J. Randall Woolridge, at 50.

1673 capital structure comprised of 50.00 percent common equity, 49.99 percent long-term
1674 debt and 0.01 percent preferred equity, rather than RMP's proposed capital structure of
1675 consisting of 53.67 percent common equity, 46.32 percent long-term debt and 0.01
1676 percent preferred equity.¹¹⁷

1677 **Q. Is Dr. Woolridge's 9.00 percent ROE recommendation fair and reasonable for**
1678 **RMP?**

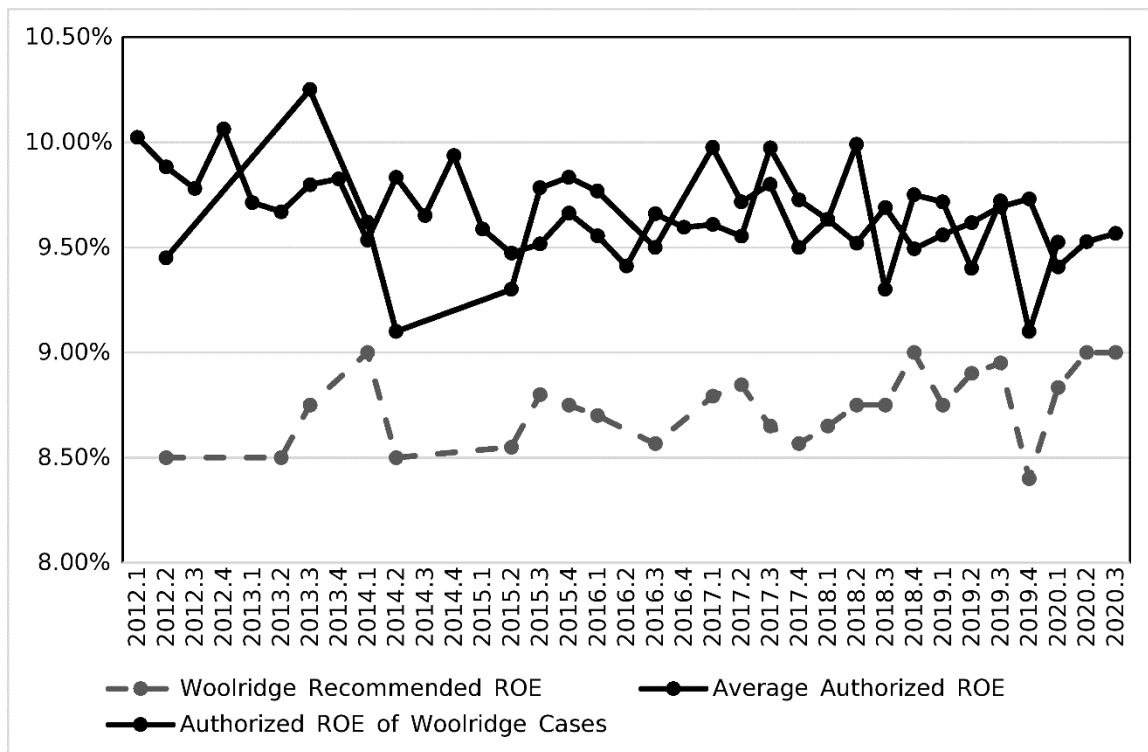
1679 A. No. The rates set in this case, including the ROE and capital structure, will directly
1680 affect RMP's cash flows in the period during which rates are in effect. The Company's
1681 cash flows, in turn, have a direct bearing on its credit quality and investors' perception
1682 of the riskiness of the enterprise. While Dr. Woolridge acknowledges the uncertainty
1683 and volatility that have characterized capital markets since February 2020, he does not
1684 appropriately reflect these conditions in his assessment of the results of his ROE models
1685 or in the development of his final recommended ROE. Dr. Woolridge has provided no
1686 justification for why it would be appropriate to reduce RMP's authorized ROE by 80
1687 basis points from the Company's current authorized ROE of 9.80 percent. As discussed
1688 in my response to the testimony of Mr. Coleman and Dr. Woolridge with respect to the
1689 concept of gradualism, credit rating agencies recently have reacted negatively to
1690 authorized ROEs that are significantly below the national average. Therefore, it is
1691 likely that adopting Dr. Woolridge's recommended ROE of 9.00 percent would result
1692 in a similar response from rating agencies and the market overall.

¹¹⁷ *Id.*, at 33.

1693 Q. Do Dr. Woolridge's ROE recommendations typically meet the comparable return
1694 standard?

1695 A. No. I have compiled Dr. Woolridge's recommendations in various cases from June
1696 2012 through the second quarter of 2020. As shown in Figure 13, Dr. Woolridge's ROE
1697 recommendations have been significantly lower than the return that is actually
1698 authorized by the state regulatory commissions, as well as lower than the average
1699 authorized return for electric and natural gas utilities at the same approximate time as
1700 his recommendation was made. Since the second quarter of 2012, Dr. Woolridge's
1701 ROE recommendation has been as much as 138 basis points below the average
1702 authorized return in the same quarter.

1703 **Figure 13: Average Authorized ROEs vs. Dr. Woolridge's Recommendations**
1704 **2012-2020**



1705 **Q. What are the principal areas of disagreement between you and Dr. Woolridge?**

1706 A. As discussed in more detail below, there are several areas in which Dr. Woolridge and
1707 I disagree, including: 1) the composition of the proxy group; 2) the use of the mean
1708 DCF results without consideration of how current market conditions are affecting the
1709 DCF model; 3) the appropriate growth rates to be relied on in the Constant Growth
1710 DCF model; 4) the reasonableness of applying a 7.0 percent outlier screen to the results
1711 of the Constant Growth DCF model; 5) the inputs and assumptions in the CAPM
1712 analysis and the reasonableness of Dr. Woolridge's CAPM results; 6) the relevance of
1713 the Bond Yield Plus Risk Premium approach; 7) the applicability of the Expected
1714 Earnings analysis; and 8) the appropriate capital structure for RMP.

1715 **A. Composition of the Proxy Group**

1716 **Q. Please explain your disagreement with Dr. Woolridge regarding the appropriate**
1717 **proxy group for RMP.**

1718 A. Dr. Woolridge and I have each developed a proxy group of electric utilities to estimate
1719 the cost of equity for RMP. However, we have used somewhat different screening
1720 criteria to develop our respective proxy groups. Dr. Woolridge's proxy group consists
1721 of 29 electric utility companies, while my proxy group consists of 22 companies.
1722 Although Dr. Woolridge notes that the proxy group that I have relied on is small, he
1723 also calculates the results of his DCF and CAPM analysis using my proxy group.

1724 **Q. As a preliminary matter, Dr. Woolridge claims that he has calculated the results**
1725 **of his DCF and CAPM analysis using your proxy group. Has he included all of the**
1726 **companies in your proxy group?**

1727 A. No. As shown on Exhibit JRW-2.1, Dr. Woolridge has included 20 of the 22 companies
1728 that are in my proxy group, as shown on Exhibit RMP___(AEB-3). In calculating the
1729 results for my proxy group, Dr. Woolridge has failed to include two companies that are
1730 in my proxy group: Dominion Resources, Inc.; and Duke Energy Corporation. As such
1731 the DCF and CAPM results presented by Dr. Woolridge for my proxy group are not
1732 representative of the complete set of companies that are in my proxy group.

1733 **Q. Do you agree with the methodology that Dr. Woolridge relied on to select his proxy**
1734 **group?**

1735 A. Not entirely. While many of Dr. Woolridge's screening criteria are similar to mine,
1736 there are several important differences that affect the composition of our respective
1737 proxy groups, including:

1738 1) Dr. Woolridge uses a revenue screen, which can fluctuate from year to year
1739 and is not representative of a business segment's contribution to earnings.

1740 2) Dr. Woolridge does not apply an owned generation screen to remove
1741 transmission and distribution (T&D) utilities that do not own regulated
1742 generation from the proxy group. This results in the inclusion of T&D
1743 utilities in the proxy group which, as Dr. Woolridge has previously noted,
1744 have lower business risk than integrated electric utilities such as RMP.¹¹⁸

¹¹⁸ See Docket No. DE 19-057, Public Service Company of New Hampshire, d/b/a Eversource Energy, Direct Testimony of Dr. J Randall Woolridge, at 17.

1745 **Q. Why do you believe that the percentage of regulated net operating income is a**
1746 **more appropriate screening criterion than the percentage of regulated revenue?**

1747 A. In establishing my proxy group, I relied on the percentage of net operating income
1748 derived from regulated operations instead of the percentage of total revenue derived
1749 from regulated operations because net operating income is more representative of the
1750 contribution of that business segment to earnings and the corporation's overall financial
1751 position. Specifically, a significant portion of gas and electric utility company revenue
1752 is derived from the costs of purchased gas, purchased fuel, and purchased power,
1753 which, in most cases, are recoverable through tracking mechanisms and do not,
1754 therefore, contribute to earnings. Furthermore, this portion of total revenue can
1755 fluctuate considerably based on the cost of fuel and other inputs. Therefore, relying
1756 exclusively on a revenue screen does not provide a clear or necessarily consistent
1757 indicator of the contribution of the regulated utility operations to a company's earnings,
1758 which is what matters most to equity investors. Net operating income excludes the cost
1759 of the purchased commodity and therefore more closely represents the contribution of
1760 the business segment to earnings.

1761 **Q. Please provide an example of a company that has been excluded from Dr.**
1762 **Woolridge's proxy group because total revenue was used instead of operating**
1763 **income as a screening criterion.**

1764 A. DTE Energy Company ("DTE") would have been included in Dr. Woolridge's Electric
1765 proxy group if the percentage of total operating income derived from regulated electric
1766 operations were used as a screening criterion instead of the percentage of total revenue
1767 derived from regulated electric operations.

1768 As discussed above, net operating income is the more appropriate screening criterion
1769 because it better approximates a business segment's contribution to earnings and the
1770 corporation's overall financial position. As shown in Exhibit JRW-2.1, DTE derives
1771 only 37 percent of its revenue from regulated electric utility operations. On that basis,
1772 DTE was excluded from Dr. Woolridge's Electric proxy group. However, DTE derives
1773 93 percent of its operating income from regulated operations and 81 percent of its
1774 regulated operating income from regulated electric utility operations. Because DTE's
1775 regulated electric operations contribute a substantial percentage of the company's
1776 earnings, similar to RMP, it is appropriate to include DTE in the proxy group for RMP.

1777 **Q. Please discuss your second concern with the screening criteria used by Dr.**
1778 **Woolridge to select his proxy group.**

1779 A. Dr. Woolridge has inappropriately included in his electric proxy group three T&D only
1780 utilities which do not own regulated generation assets. RMP is a vertically integrated
1781 electric utility that owns substantial electric generation assets. The owned generation
1782 screen used to select my proxy group is intended to remove companies from the proxy
1783 group that do not own substantial amounts of regulated generation and may not be
1784 comparable to RMP on that basis. According to Moody's, generation ownership causes
1785 vertically integrated electric utilities to have higher business risk than electric T&D
1786 companies. Moody's notes:

1787 Generation utilities and vertically integrated utilities generally
1788 have a higher level of business risk because they are engaged in
1789 power generation, so we apply the Standard Grid. We view power
1790 generation as the highest-risk component of the electric utility
1791 business, as generation plants are typically the most expensive part
1792 of a utility's infrastructure (representing asset concentration risk)
1793 and are subject to the greatest risks in both construction and

1794 operation, including the risk that incurred costs will either not be
1795 recovered in rates or recovered with material delays.¹¹⁹

1796 **Q. Which companies in Dr. Woolridge’s proxy group do not own a material amount**
1797 **of regulated generation assets?**

1798 A. Three of the 29 companies in Dr. Woolridge’s Electric proxy group are considered by
1799 investors as T&D utilities and do not own a material amount of regulated generation.
1800 These three companies are: AVANGRID, Inc.; Consolidated Edison, Inc.; and
1801 Eversource Energy. As shown in Exhibit RMP____(AEB-10R), the DCF result for
1802 Consolidated Edison is 6.78 percent using 30-day average stock prices.

1803 **Q. Do you agree with Dr. Woolridge that what he characterizes as “errors” in your**
1804 **DCF analysis are “magnified by the fact that she [Ms. Bulkley] has used a small**
1805 **proxy group?”¹²⁰**

1806 A. No, I do not. First, I do not agree with Dr. Woolridge that there are “errors” in my DCF
1807 analysis. Further, comparability of the group is more important than the number of
1808 companies included in the proxy group. While my proxy group is slightly smaller than
1809 Dr. Woolridge’s (i.e., 22 companies vs. 29 for Dr. Woolridge’s group), my proxy group
1810 contains a sufficient number of companies to estimate the cost of equity. In addition,
1811 my proxy group is superior to Dr. Woolridge’s group because it more closely reflects
1812 RMP’s operational profile, which includes ownership of regulated generation assets,
1813 and screens on regulated net operating income rather than revenue.

¹¹⁹ Moody’s Investors Service, Rating Methodology: Regulated Electric and Gas Utilities, June 23, 2017, at 21.

¹²⁰ Direct Testimony of Dr. J. Randall Woolridge, at 8-9.

1814 **Q. What is your conclusion with respect to the proxy group used to estimate the cost**
1815 **of equity for RMP?**

1816 A. My primary conclusion is that the composition of the proxy group is not a significant
1817 driver in the differences between Dr. Woolridge's recommended ROE and mine. While
1818 I continue to believe that my screening criteria result in a more risk comparable proxy
1819 group to RMP, I have limited my response on this issue to focus more attention on what
1820 is causing the substantial differences in our respective ROE analyses and
1821 recommendations.

1822 **B. Constant Growth DCF Analysis**

1823 **Q. Please summarize the results of Dr. Woolridge's Constant Growth DCF analysis.**

1824 A. Dr. Woolridge performs a Constant Growth DCF analysis using both his Electric proxy
1825 group and my proxy group, which produces ROE results of 8.70 percent and 8.95
1826 percent, respectively. For Dr. Woolridge's Electric proxy group, his analysis is based
1827 on the mean dividend yield for the proxy companies of 3.60 percent and Dr.
1828 Woolridge's selected growth rate of 5.00 percent.¹²¹ The analysis he performs using
1829 my proxy group is based on the mean dividend yield for the proxy companies of 3.60
1830 percent and Dr. Woolridge's selected growth rate of 5.25 percent.¹²² Dr. Woolridge
1831 does not provide an exhibit that develops the ROE estimates for each individual
1832 company in the proxy group.

¹²¹ Direct Testimony of Dr. J. Randall Woolridge, Table 3, at 48.

¹²² *Ibid.*

1833 **Q. What are the major differences in methodology and opinions that drive the**
1834 **differences in your respective DCF analyses?**

1835 A. The major methodological differences between the DCF analyses performed by Dr.
1836 Woolridge and me are: 1) the development of the growth rate; 2) the application of the
1837 DCF model to the proxy group; and 3) the weight placed on the DCF results in the final
1838 recommendation.

1839 **1. Development of the Growth Rate**

1840 **Q. Please summarize Dr. Woolridge’s criticism of the growth rate upon which you**
1841 **have relied.**

1842 A. Dr. Woolridge criticizes my DCF analysis for the exclusive use of “overly optimistic
1843 and upwardly biased EPS growth rate forecasts of Wall Street analysts and *Value*
1844 *Line*”¹²³ and devotes many pages to the summary and discussion of several alternative
1845 growth rates.

1846 **Q. Please summarize Dr. Woolridge’s growth rate analysis.**

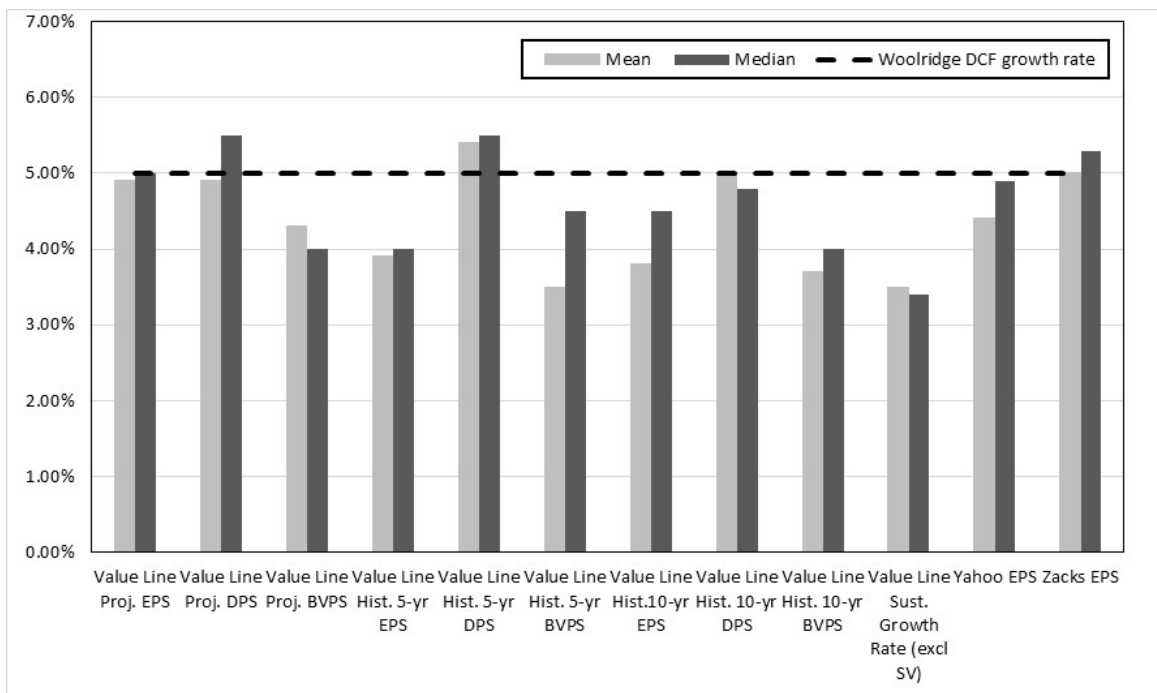
1847 A. Dr. Woolridge considers several growth rate assumptions including historical and
1848 projected growth in EPS, historical and projected dividends per share (“DPS”) and
1849 book value per share (“BVPS”), and the internal growth rate. While Dr. Woolridge
1850 expresses many concerns with the use of EPS growth rates and suggests that the use of
1851 EPS growth rates in my DCF analysis is one of his primary concerns with the analysis
1852 presented in my direct testimony, he ultimately gives “primary weight to the projected
1853 EPS growth rate of Wall Street analysts.”¹²⁴

¹²³ *Id.*, at 11.

¹²⁴ *Id.*, at 47.

1854 Figure 14 depicts the 24 growth rates that Dr. Woolridge summarizes in his direct
 1855 testimony for his Electric proxy group. As shown in Figure 14, 17 of the 24 growth
 1856 rates that Dr. Woolridge reviewed are below the 5.00 percent growth rate that underlies
 1857 the result of his DCF analysis for his Electric proxy group. In fact, Dr. Woolridge
 1858 recognizes that “over the very long term, dividends and earnings will have to grow at
 1859 a similar growth rate.”¹²⁵

1860 **Figure 14: Growth Rates Considered by Dr. Woolridge**



1861

1862 **Q. What is your response to Dr. Woolridge’s assertion that you “exclusively used the**
 1863 **overly optimistic and upwardly biased EPS growth rate forecasts of Wall Street**
 1864 **analysts and Value Line”?**¹²⁶

1865 **A.** I fail to understand Dr. Woolridge’s definition of what he considers an “overly
 1866 optimistic and upwardly biased EPS growth rate forecast.” In Docket No. 49381 for

¹²⁵ *Id.*, at 42.

¹²⁶ *Id.*, at 66.

1867 Southwestern Public Service Company before the Public Utility Commission of Texas,
 1868 Dr. Woolridge provided this same criticism of my DCF analysis when the growth rate
 1869 that I relied on was 5.04 percent. In fact, this is a routine criticism of the growth rates
 1870 relied on by any ROE witness to whom Dr. Woolridge responds. Figure 15 below
 1871 summarizes several recent cases where Dr. Woolridge has provided testimony, the
 1872 growth rates that he has relied on in his DCF analysis, and the “overly optimistic and
 1873 upwardly biased” growth rates of the Company witnesses.

Figure 15: Growth Rates relied on by Dr. Woolridge

Date	Jurisdiction	Docket No.	Woolridge Growth rate	Company witness growth rate
2019	New Hampshire	19-064	5.25% ¹²⁷	5.42% ¹²⁸
2019	New Hampshire	19-057	5.00% ¹²⁹	5.52% ¹³⁰
2020	Texas	49831	5.00% ¹³¹	5.04% ¹³²
2020	Maryland	9630	5.00% ¹³³	5.52% ¹³⁴
2020	North Carolina	E-2 Sub 1219	5.00% ¹³⁵	5.76% ¹³⁶
2020	Utah	20-035-04	5.00% ¹³⁷	5.20% ¹³⁸

1875 As shown in Figure 15, despite the criticism that the company witness in each of these
 1876 cases has used overly optimistic EPS growth rates, Dr. Woolridge also has relied
 1877 primarily on EPS growth rates in each case. Furthermore, the range of growth rates that

¹²⁷ New Hampshire Public Utilities Commission, Docket No. DE 19-064, page 1 of Attachment JRW-9.
¹²⁸ New Hampshire Public Utilities Commission, Docket No. DE 19-064, Attachment JC-4.
¹²⁹ New Hampshire Public Utilities Commission, Docket No. DE 19-057, Direct Testimony of Dr. J. Randall Woolridge, at 47.
¹³⁰ New Hampshire Public Utilities Commission, Docket No. DE-057, Attachment AEB-4.
¹³¹ Public Utility Commission of Texas, Docket No. 49831, Exhibit JRW-7, page 1.
¹³² Public Utility Commission of Texas, Docket No. 49831, Attachment AEB-RR-2, page 1.
¹³³ Public Service Commission of Maryland, Case No. 9630, Exhibit JRW-7, page 1.
¹³⁴ Public Service Commission of Maryland, Case No. 9630, Schedule RBH-1, page 1.
¹³⁵ North Carolina Utilities Commission, Docket E-2 Sub 1219, Exhibit JRW-7, page 1.
¹³⁶ North Carolina Utilities Commission, Docket E-2 Sub 1219, Exhibit RBH-1, page 1.
¹³⁷ Public Service Commission of Utah, Docket No. 20-035-04, Exhibit JRW-7, page 1.
¹³⁸ Public Service Commission of Utah, Docket No. 20-035-04, Exhibit RMP___(AEB-4), page 1.

1878 Dr. Woolridge has relied on is similar to the range that has been relied on by the
1879 company witness. Considering this evidence, it appears that any growth rate relied on
1880 by a company witness that differs from what Dr. Woolridge has selected as a growth
1881 rate is characterized by Dr. Woolridge as the use of “overly optimistic and upwardly
1882 biased EPS growth rate forecasts.”

1883 **Q. Why do you believe that EPS growth rates are the most appropriate growth rates**
1884 **to use in the DCF model?**

1885 A. As discussed in my direct testimony and in my response to Mr. Coleman, earnings are
1886 the fundamental determinant of a company’s ability to pay dividends.¹³⁹ Further, both
1887 dividends and book value per share may be directly affected by short run management
1888 decisions. Despite his criticism of the use of EPS growth rates, it is Dr. Woolridge’s
1889 view that “over the very long term, dividends and earnings will have to grow at a similar
1890 growth rate.”¹⁴⁰

1891 In addition to the theoretical basis for the use of earnings growth rates, there is the
1892 practical consideration of the availability of market data. EPS growth rates are the only
1893 forward-looking growth rates available on a consensus basis. With the exception of his
1894 EPS growth rates, the source for all of Dr. Woolridge’s growth rates is Value Line. Dr.
1895 Woolridge’s reliance on Value Line’s historical and forecasted DPS and BVPS growth
1896 rates, as well as Value Line’s estimates of projected ROE and retention rates for his
1897 internal growth rate, unnecessarily introduces “sole source” bias into his calculations.
1898 By contrast, my Constant Growth DCF analysis uses earnings growth rates from

¹³⁹ Direct Testimony of Ann E. Bulkley, at 47.

¹⁴⁰ Direct Testimony of Dr. J. Randall Woolridge, at 42.

1899 multiple sources, including Zack’s and Thomson First Call, both of which provide
1900 consensus estimates from multiple analysts.

1901 **Q. Do you share Dr. Woolridge’s concern that “long-term EPS growth rate forecasts**
1902 **of Wall Street securities analysts are overly optimistic and upwardly biased”?**¹⁴¹

1903 A. No, I do not. As discussed in my response to Mr. Coleman, the Global Settlement
1904 served to eliminate or significantly reduce the analyst bias referred to by Dr. Woolridge.
1905 Thus, it is unclear why investors would assume that the EPS growth rates for the proxy
1906 companies are susceptible to an ongoing upward bias.

1907 **Q. Have you reviewed the studies cited by Dr. Woolridge, which examine the**
1908 **potential bias in analysts’ growth projections?**

1909 A. Yes. Dr. Woolridge references a number of articles that he asserts prove the potential
1910 bias in analysts’ EPS projections.¹⁴² However, only one of the studies that Dr.
1911 Woolridge cites analyzes the period after the Global Settlement on October 31, 2003.
1912 That April 2010 McKinsey and Company study notes:

1913 Exceptions to the long pattern of excessively optimistic forecasts
1914 are rare, as a progression of consensus earnings estimates for the
1915 S&P 500 shows (Exhibit 1). Only in years such as 2003 to 2006,
1916 when strong economic growth generated actual earnings that
1917 caught up with earlier predictions, do forecasts actually hit the
1918 mark. This pattern confirms our earlier findings that analysts
1919 typically lag behind events in revising their forecasts to reflect
1920 new economic conditions. When economic growth accelerates,
1921 the size of the forecast error declines; when economic growth
1922 slows, it increases. So as economic growth cycles up and down,
1923 the actual earnings S&P 500 companies report occasionally
1924 coincide with the analysts’ forecasts, as they did, for example, in
1925 1988, from 1994 to 1997, and from 2003 to 2006.¹⁴³

¹⁴¹ *Id.*, at 43.

¹⁴² Direct Testimony of Dr. J. Randall Woolridge, at 43.

¹⁴³ Marc Goedhart, Rishi Raj, and Abhishek Saxena, “Equity analysts: Still too bullish” McKinsey and Company, April 2010.

1926 The earnings reported by S&P 500 companies met and exceeded the growth rate
1927 projected by analysts between 2003 and 2006.¹⁴⁴ The period analyzed in the study
1928 extends through 2008, and analysts' projections did exceed actual earnings growth in
1929 2007 and 2008. However, this time-period reflected the start of the Great Recession
1930 and does not indicate analyst bias, but rather shows that analysts were unable to predict
1931 the severity and magnitude of the financial crisis. Furthermore, the McKinsey study
1932 examines analysts' EPS forecasts for a given year at one, two and three years out. It
1933 does not review the 3 to 5-year EPS growth rates that I used in my Constant Growth
1934 DCF analysis, which are meant to represent average growth for a company over a
1935 longer period of time. In summary, Dr. Woolridge has provided no evidence that the
1936 EPS growth rates for the companies in my DCF analysis are the result of consistent and
1937 pervasive analyst bias.

1938 **Q. Do you agree with Dr. Woolridge that historical measures of growth are relevant**
1939 **to a forward-looking evaluation of the cost of equity?**

1940 A. While I agree that historical measures of growth are relevant, these historical growth
1941 rates are likely already incorporated into investors' forward-looking growth rates.
1942 Therefore, specific consideration of historical growth rates is likely to overweight
1943 history in the analysis. The Constant Growth DCF model is a forward-looking model
1944 that evaluates investors' required returns based on expected future cash flows. As such,
1945 the appropriate measure of growth in the DCF analysis is investors' expectations. Dr.
1946 Woolridge also observes that historical growth rates must be treated with caution
1947 because “[i]n some cases, past growth may not reflect future growth potential.”¹⁴⁵ As

¹⁴⁴ *Ibid.*

¹⁴⁵ Direct Testimony of Dr. J. Randall Woolridge, at 40.

1948 discussed previously, Dr. Woolridge relies primarily on long-term EPS growth rate
1949 estimates that are often not materially different from the estimates of company
1950 witnesses.

1951 **Q. Why do you disagree with Dr. Woolridge’s calculation of the retention growth**
1952 **rate?**

1953 A. Dr. Woolridge’s calculation of retention growth rates (also known as “internal growth
1954 rates” or “sustainable growth rates”) considers only the product of earnings retention
1955 rates and earned returns on common equity, or what are commonly known as internally-
1956 generated funds. In the sustainable growth formula, this is commonly referred to as the
1957 product of “ $b \times r$ ”, where “ b ” is the retention ratio, or the portion of net income not paid
1958 in dividends, and “ r ” is the expected ROE on the portion of net income that is retained
1959 within the company as a means for future growth.

1960 Dr. Woolridge fails to consider that earnings growth also occurs as a result of
1961 new equity issuances, or what are commonly known as externally-generated funds. In
1962 the sustainable growth formula, this is shown as the product of “ $s \times v$ ”, where “ s ”
1963 represents the growth in shares outstanding and “ v ” is that portion of the market-to-
1964 book (M/B) ratio that exceeds unity. This methodology is recognized as a common
1965 approach to calculating the sustainable growth rate.¹⁴⁶

1966 By only considering the funds from internally-generated sources, Dr. Woolridge’s
1967 sustainable growth rate calculation understates the prospective growth rates for his
1968 proxy group companies. As shown in Exhibit RMP____(AEB-9R), had Dr. Woolridge
1969 included the “ $s \times v$ ” component in his computation, the mean sustainable growth rate

¹⁴⁶ See Roger Morin, New Regulatory Finance, at 306.

1970 for his Electric proxy group would increase by approximately 78 basis points from 3.55
1971 percent to 4.33 percent.

1972 **Q. Do you have other concerns with the reasonableness of Dr. Woolridge's**
1973 **sustainable growth rate calculation?**

1974 A. Yes. Since the "r" in the "b x r" approach refers to the projected ROE, Dr. Woolridge
1975 has effectively pre-supposed Value Line's ROE and payout ratio projections for his
1976 proxy group companies. By using this growth measure, Dr. Woolridge has assumed
1977 that Value Line's ROE projections are reasonable, even though he dismisses my
1978 Expected Earnings analysis, which is based on this same Value Line data.¹⁴⁷ Further,
1979 as shown on page 4 of Exhibit JRW-7, the mean and median ROE projections for the
1980 companies in Dr. Woolridge's Electric proxy group are 10.30 percent and 10.00
1981 percent, respectively, which are significantly higher than his recommended ROE for
1982 RMP of 9.00 percent.

1983 **Q. As a practical matter, does Dr. Woolridge rely on these alternative growth rates?**

1984 A. No, he does not. Despite his criticism of my DCF methodology, Dr. Woolridge has also
1985 relied primarily on projected EPS growth rates. Therefore, Dr. Woolridge's criticism
1986 of my DCF analysis because it relies on EPS growth rates is invalidated by his own
1987 views and his ultimate reliance on EPS growth rates.

1988 **Q. Have you reviewed Dr. Woolridge's growth rate recommendations in other cases?**

1989 A. Yes. Figure 16 summarizes the dividend yields and growth rates that Dr. Woolridge
1990 has relied on in the development of his Constant Growth DCF models for 59 cases since
1991 June 2012. As shown in Figure 16, as the dividend yields for his proxy groups have

¹⁴⁷ Direct Testimony of Dr. J. Randall Woolridge, at 87-90.

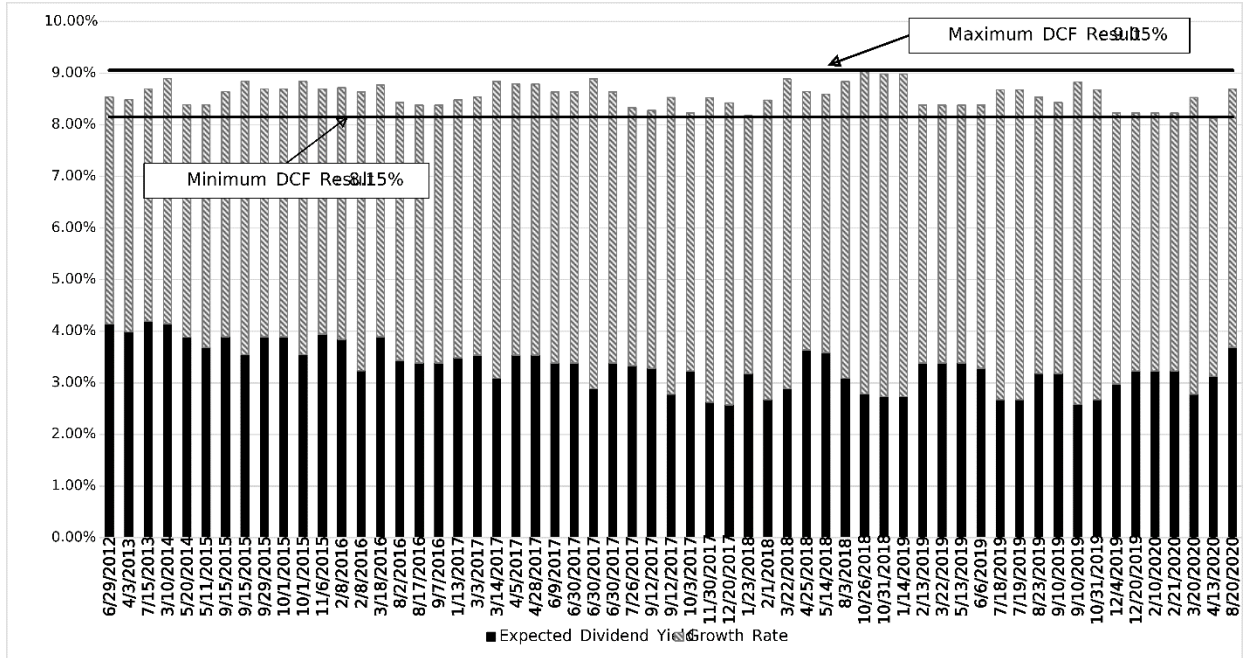
1992 declined in response to capital market conditions, Dr. Woolridge simply selects a
1993 higher projected growth rate in the Constant Growth DCF model. Conversely, when
1994 the dividend yields for his proxy group increase, Dr. Woolridge selects a lower
1995 projected growth rate.

1996 **Q. Have you conducted any analysis on the dividend yield and growth rate**
1997 **assumptions relied on in Dr. Woolridge's DCF analyses over this time-period?**

1998 A. Yes, I calculated the correlation between these two assumptions over time in Dr.
1999 Woolridge's analysis. The correlation coefficient between the dividend yield used in
2000 Dr. Woolridge's DCF analysis and the growth rate using the 59 cases from the last 8
2001 years is (0.89), which suggests a high degree of correlation between the dividend yield
2002 and the growth rate.¹⁴⁸ Furthermore, the correlation coefficient is negative, which
2003 implies that as the dividend yield increases (decreases), the growth rate decreases
2004 (increases). This supports my conclusion that Dr. Woolridge's selected growth rate in
2005 his DCF analysis appears to be related to whether the dividend yield for his proxy group
2006 has increased or decreased.

¹⁴⁸ A correlation coefficient with an absolute value of 0.8 or higher indicates a very strong relationship.

Figure 16: Woolridge Historical Dividend Yields and Growth Rates



2008 **Q. What do you conclude from this analysis?**

2009 **A.** Despite changes in interest rates and the price of utility stocks over this period, all of
 2010 which should have an effect on the results of the ROE estimation models, as shown in
 2011 Figure 16, by selecting the growth rate used in the DCF model, Dr. Woolridge has
 2012 maintained DCF results in a tight range, never exceeding 9.05 percent over the last 8
 2013 years.

2014 **2. Application of the DCF model to the proxy group**

2015 **Q. Why is it important to consider the ROE results for each proxy company?**

2016 **A.** As discussed in the *Hope* decision, developing a return that reflects investor
 2017 expectations should be of primary importance, not the model or methodology employed
 2018 to derive that result. As such, it is important to consider whether the return estimates
 2019 for each individual company are reasonable.

2020 **Q. Does Dr. Woolridge develop ROE estimates for each individual company in his**
2021 **Electric proxy group?**

2022 A. No. Unlike the DCF analyses presented in my direct testimony, Dr. Woolridge’s DCF
2023 analysis does not provide the result for each individual company. Doing so allows the
2024 opportunity to review the reasonableness of the DCF model results on a company-
2025 specific basis.

2026 **Q. How does the growth rate selected by Dr. Woolridge affect his DCF analysis?**

2027 A. As previously discussed, Dr. Woolridge simply chooses the growth rate that he relies
2028 on from within the projections he has summarized. Because he is selecting a value,
2029 rather than relying directly on the consensus estimates from industry analysts, Dr.
2030 Woolridge’s DCF analysis is entirely subjective and judgment based.

2031 It is also important to recognize that Dr. Woolridge’s DCF analysis is not performed at
2032 the individual company level, but rather is one growth rate, that he has selected, and
2033 the average dividend yield for the proxy companies. As noted in both our direct
2034 testimonies, the Constant Growth form of the DCF model is as follows:

2035
$$P_0 = \frac{D_1}{(1+k)} + \frac{D_2}{(1+k)^2} + \dots + \frac{D_n}{(1+k)^n} \quad [1]$$

2036 Where P_0 represents the current stock price, $D_1 \dots D_\infty$ are all expected future dividends,
2037 and k is the discount rate, or required ROE. Equation [1] is a standard present value
2038 calculation that can be simplified and rearranged into the following form:

2039
$$k = \frac{D_0(1+g)}{P_0} + g \quad [2]$$

2040 In this form of the DCF model, the dividend yield is also affected by the growth rate to
2041 develop the next year's cash flow. Therefore, Dr. Woolridge's method of selecting the
2042 growth rate imposes his judgment on both terms of the Constant Growth DCF model.

2043 **Q. How does your application of the Constant Growth DCF model differ from Dr.**
2044 **Woolridge's approach?**

2045 A. As discussed in my direct testimony, my Constant Growth DCF model relies on
2046 projected EPS growth rates reported by Value Line, as well EPS consensus estimates
2047 reported by Zacks and Yahoo! Finance. I then consider the mean growth rates, as well
2048 as the low and high reported growth rates, to develop individual DCF results for each
2049 proxy group member. In sum, my Constant Growth DCF analysis relies directly on the
2050 EPS growth estimates for each proxy company.

2051 **Q. Have you reviewed the ROE results for each of the companies in Dr. Woolridge's**
2052 **proxy group using the dividend yields and earnings growth rates assumed by Dr.**
2053 **Woolridge?**

2054 A. Yes. Exhibit RMP____(AEB-10R) provides the DCF result for each of the companies
2055 in Dr. Woolridge's Electric proxy group based on the dividend yields calculated by Dr.
2056 Woolridge and the earnings growth rates from Value Line, Yahoo and Zacks relied on
2057 by Dr. Woolridge. Applying my risk premium screen, which excludes individual proxy
2058 group results below 7.0 percent, the mean ROE estimates for Dr. Woolridge's Electric
2059 proxy group are 9.03 percent (30-day), 9.03 percent (90-day), and 8.90 percent (180-
2060 day).

2061 **3. Weighting of the DCF results in the final recommendation**

2062 **Q. Please explain how Dr. Woolridge establishes his ROE recommendation.**

2063 A. Dr. Woolridge relies primarily on the results of the DCF model and also considers the
2064 authorized ROEs for electric utilities in other jurisdictions. On that basis, his ROE
2065 recommendation of 9.00 percent is slightly higher than the upper end of his DCF results
2066 of 8.95 percent.¹⁴⁹

2067 **Q. Do you agree with Dr. Woolridge’s primary reliance on the result of the DCF**
2068 **model?**

2069 A. No. As discussed in this section, Dr. Woolridge’s DCF analysis is based entirely on his
2070 judgment. I have demonstrated, through a review of 59 cases where Dr. Woolridge has
2071 offered his ROE recommendation, that Dr. Woolridge’s selection of the EPS growth
2072 rate in his DCF model is subjective and appears to be highly correlated with the then
2073 current dividend yield. Comparing his recommendation to authorized ROEs over time
2074 demonstrates that Dr. Woolridge’s DCF results are well below the average authorized
2075 ROEs for electric and gas utilities, demonstrating that his judgment is not considering
2076 all the necessary risk factors for the subject companies.

2077 **C. Projected DCF Analysis**

2078 **Q. Please discuss Dr. Woolridge’s criticism of your Projected DCF analysis.**

2079 A. Dr. Woolridge claims there are two “errors” with my Projected DCF analysis.¹⁵⁰ The
2080 first error is that the projected DCF is a “totally” new approach, and the second error is
2081 that it involves a “mismatch” of data.¹⁵¹ According to Dr. Woolridge, the analysis

¹⁴⁹ Direct Testimony of Dr. J. Randall Woolridge, at 4.

¹⁵⁰ *Id.*, at 75.

¹⁵¹ *Ibid.*

2082 incorrectly combines three-to-five year projected stock prices and dividends with
2083 projected earnings growth rates from 2019.

2084 **Q. Do you agree with Dr. Woolridge that your Projected DCF analysis relies on a**
2085 **“mismatch” of data?**

2086 A. No, I do not. Dr. Woolridge testifies that the use of the Constant Growth DCF model
2087 is appropriate for the utility industry because the industry is in the “maturity stage of
2088 the life cycle.”¹⁵² According to Dr. Woolridge, this means that the earnings growth
2089 rate, the dividend payout ratio and the ROE stabilize for the remainder of the
2090 company’s life.¹⁵³ As shown in Exhibit RMP____(AEB-5) to my direct testimony, for
2091 my Projected DCF analysis, I have relied on projected stock prices and dividends for
2092 the period of 2023-2025; however, for the growth rate I have utilized the five-year
2093 projected earnings growth rates from my Constant Growth DCF analysis. Thus, the
2094 Projected DCF model assumes that the growth rate in the DCF analysis will remain
2095 stable over time. This assumption is consistent with the reason Dr. Woolridge cites for
2096 relying on the Constant Growth DCF model. Therefore, it is unclear why Dr. Woolridge
2097 is concerned with my use of the five-year projected earnings growth rates from 2019
2098 in my Projected DCF analysis.

2099 **Q. Do you have any other observations regarding the Projected DCF model?**

2100 A. Yes. As discussed above and in my direct testimony, the valuations of utilities are
2101 currently at unsustainably high levels. If the valuations of electric utilities decline as
2102 expected, the dividend yields will increase, which will result in increased estimates of
2103 the cost of equity using the DCF model. The projected stock prices developed by Value

¹⁵² *Id.*, at 35-36.

¹⁵³ *Ibid.*

2104 Line reflect this relationship. Consistent with market expectations, Value Line projects
2105 that the stock prices of the companies in my proxy group will decrease over the near-
2106 term. The purpose of the Projected DCF analysis is to illustrate the effect that the
2107 decline in utility stock prices would have on the cost of equity during the period that
2108 RMP's rates will be in effect.

2109 **Q. Does Dr. Wooldridge rely on Value Line projections in his DCF analysis?**

2110 A. Yes. While Dr. Woolridge criticizes my reliance on three- to five-year projections of
2111 stock prices and dividends, and while he criticizes Value Line's EPS growth rates as
2112 overly optimistic, he also relies on Value Line projections in developing his Constant
2113 Growth DCF analysis. Specifically, Dr. Woolridge relies on Value Line's EPS, DPS,
2114 BVPS and retention growth rate projections over the same time-period as the growth
2115 rate estimate in his Constant Growth DCF analysis. As such, Dr. Woolridge relies on
2116 the very same Value Line projection period and data that he has concerns with when
2117 applied in my Projected DCF analysis.

2118 **D. CAPM Analysis**

2119 **Q. Please summarize Dr. Woolridge's CAPM results and explain how he uses that**
2120 **analysis.**

2121 A. As shown in Table 4 of Dr. Woolridge's direct testimony, his CAPM results are 7.60
2122 percent for both his Electric proxy group and mine. These results are based on a risk-
2123 free rate of 2.50 percent, a Beta coefficient of 0.85 for both his Electric proxy group
2124 and my proxy group, and an MRP of 6.00 percent. The results of Dr. Woolridge's
2125 CAPM analysis form the lower boundary of his range of results for RMP. Dr.
2126 Woolridge ultimately relies primarily on the results of his Constant Growth DCF model

2127 in his establishing his ROE recommendation. The results of Dr. Woolridge’s CAPM
2128 analysis are well below the authorized ROE for any U.S. electric utility in the past 40
2129 years.¹⁵⁴

2130 **Q. What are your areas of disagreement with Dr. Woolridge’s CAPM analysis?**

2131 A. I have three areas of concern with the inputs and assumptions that Dr. Woolridge has
2132 relied on to derive his CAPM results. First, in spite of the fact that Dr. Woolridge
2133 discusses the low interest rate environment and his concern with the reliability of
2134 interest rate forecasts over the past decade,¹⁵⁵ he uses a “normalized” risk-free rate of
2135 2.50 percent in his CAPM analysis.¹⁵⁶ Second, Dr. Woolridge relies on Value Line’s
2136 Beta coefficients for the companies in his Electric proxy group and my proxy group.
2137 However, he questions the Value Line method for calculating the Beta coefficient, and
2138 in particular he expresses concern with the formula that Value Line uses to adjust the
2139 raw Beta. Finally, I take issue with Dr. Woolridge’s use of an MRP of 6.00 percent
2140 because it is based primarily on the results of investor surveys and academic research
2141 rather than forward-looking market data and does not reflect the inverse relationship
2142 between interest rates and the equity risk premium.

2143 As shown in Figure 17, two of the three inputs used in Dr. Woolridge’s CAPM
2144 analysis have remained relatively constant since 2012, not recognizing any of the
2145 market fluctuations that have occurred over that period. Furthermore, it appears that
2146 Dr. Woolridge has not evaluated the results of his CAPM for reasonableness.
2147 Comparing the results in Figure 17 below to recently authorized ROEs shown in Figure

¹⁵⁴ Source: Regulatory Research Associates.

¹⁵⁵ Direct Testimony of Dr. J. Randall Woolridge, at 20.

¹⁵⁶ Direct Testimony of Dr. J. Randall Woolridge, at 50.

2148

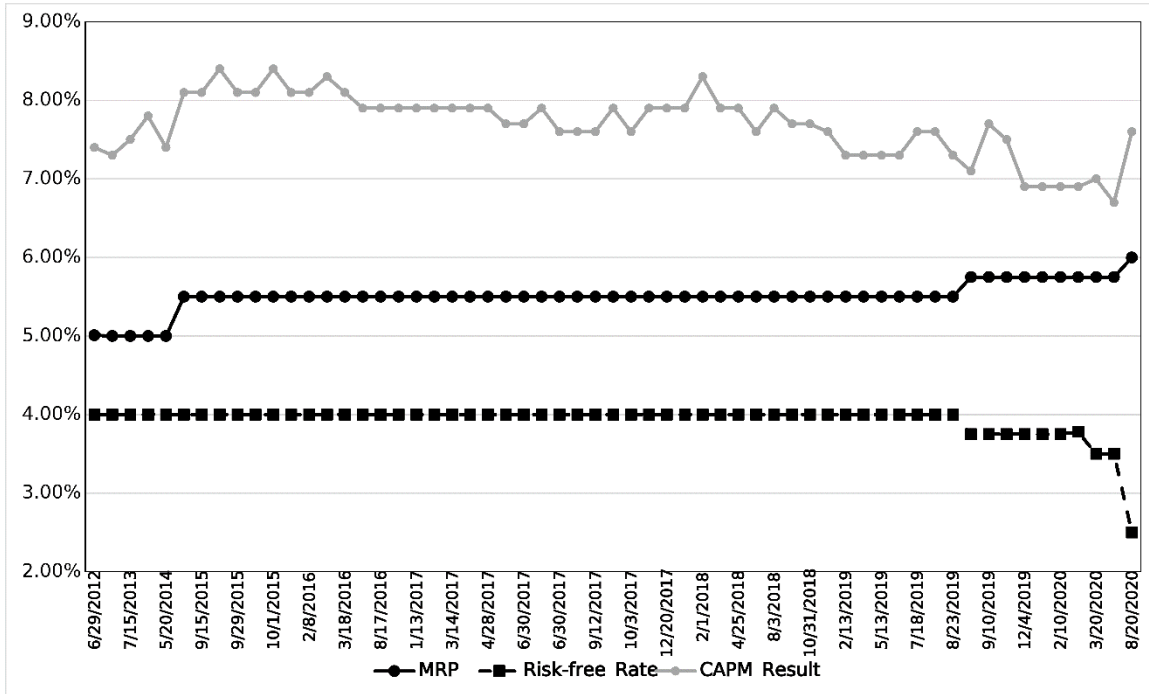
2, it is clear that the CAPM results, as specified by Dr. Woolridge, are unreasonably

2149

low compared to returns authorized by regulatory commissions over this time period.

2150

Figure 17: Risk-free Rate and MRP relied on by Dr. Woolridge



2151

Q. What concerns do you have with the risk-free rate relied on by Dr. Woolridge in his CAPM analysis?

2152

2153

A. The methodology that Dr. Woolridge uses to support his normalized risk-free rate is

2154

unclear at best and does not appear to reflect current or expected market conditions.

2155

First, it is unclear what Dr. Woolridge believes his normalized risk-free rate represents.

2156

Dr. Woolridge states that he has reviewed historical yields on the 30-year Treasury

2157

bond from 2013-2020, which range from 1.3 percent to 4.0 percent, referencing Exhibit

2158

JRW-8 for this analysis. Exhibit JRW-8.2 shows that the yield on the 30-year Treasury

2159

bond has been above 2.50 percent for the majority of the time-period that Dr.

2160

Woolridge reviewed. The rationale he provides for selecting 2.50 percent is as follows:

2161

“Given the recent range of yields, I have chosen to use a yield toward the middle of the

2162 range as my risk-free interest rate.”¹⁵⁷ This suggests that Dr. Woolridge recognizes
2163 and is reflecting potentially higher interest rates when he selects the risk-free rate from
2164 within his historical data set. However, he then directly contradicts this rationale in the
2165 following statements in his direct testimony:

2166 **Q. Does your 2.50 percent risk-free interest rate take into consideration**
2167 **forecasts of higher interest rates?**

2168 A. No, it does not. As I stated before, forecasts of higher interest rates have been
2169 notoriously wrong for a decade. My 2.50 percent risk-free interest rate takes into
2170 account the range of interest rates in the past and effectively synchronizes the risk-free
2171 rate with the market risk premium. The risk-free rate and the market risk premium are
2172 interrelated in that the market risk premium is developed in relation to the risk-free rate.
2173 As discussed below, my market risk premium is based on the results of many studies
2174 and surveys that have been published over time. Therefore, my risk-free interest rate of
2175 2.50 percent is effectively a normalized risk-free rate of interest.¹⁵⁸

2176 In addition to being inconsistent with his prior statement on the basis for the
2177 2.50 percent risk-free rate, it is concerning that Dr. Woolridge suggests that the MRP
2178 and the risk-free rate he has chosen are somehow synchronized. As discussed in more
2179 detail later in my rebuttal testimony, Dr. Woolridge selects his MRP from within a
2180 range that he develops from survey data.¹⁵⁹ He provides no explanation regarding how
2181 the selected “normalized” 2.50 percent risk-free rate is “synchronized” with the
2182 selected MRP. Furthermore, the estimation of the cost of equity is forward-looking;

¹⁵⁷ *Id.*, at 50.

¹⁵⁸ *Id.*, at 50.

¹⁵⁹ *Id.*, at 58-59.

2183 therefore, synchronizing the risk-free rate to historical survey data is not reflective of
2184 the expected return over the rate period.

2185 **Q. What Beta coefficients are relied on by Dr. Woolridge?**

2186 A. Dr. Woolridge relies on the average Value Line estimate of Beta coefficients for the
2187 companies in his Electric proxy group and the companies in my proxy group. However,
2188 Dr. Woolridge questions the sharp increase in the Value Line Beta coefficients that has
2189 occurred since February 2020, and suggests that this increase is due in part to Value
2190 Line’s methodology for calculating Beta.¹⁶⁰ In particular, Dr. Woolridge expresses
2191 concern with the adjustment formula that Value Line uses to adjust raw Beta
2192 coefficients for the tendency of Beta to revert to the market mean of 1.0 over time.¹⁶¹

2193 **Q. What is your response to Dr. Woolridge’s concern with Value Line Beta**
2194 **coefficients?**

2195 A. Dr. Woolridge has consistently relied on Value Line as the source of his Beta
2196 coefficients in his CAPM analysis for many years which he admits in his response to
2197 RMP 1.3. Now, when those Beta coefficients have increased to reflect the higher
2198 correlation between utility stocks and the broader market since February 2020, Dr.
2199 Woolridge takes issue with the methodology used by Value Line to calculate the Beta
2200 coefficients. As discussed in Section V of my rebuttal testimony, utilities have
2201 traditionally been a “safe-haven” for investors, but that has not been true since the onset
2202 of the market’s response to the COVID-19 pandemic. The Value Line Beta coefficients
2203 have appropriately increased to reflect the higher correlation between utility stocks and
2204 the broader market, as measured by the NYSE Composite Index. It is not reasonable

¹⁶⁰ *Id.*, at 52-54.

¹⁶¹ *Id.*, at 52-54.

2205 for Dr. Woolridge to suddenly call into question the methodology used by Value Line
2206 to estimate Beta coefficients when he has consistently relied on Value Line as the
2207 source of his Betas for many years when the relative risk of utility stocks was much
2208 lower than it is in today's market conditions.

2209 **Q. Why is it reasonable to also rely on Bloomberg's Beta coefficients?**

2210 A. In my view, it is reasonable to consider several measures of market conditions in
2211 estimating the ROE. Bloomberg is a respected source of financial information, and Beta
2212 coefficients from Bloomberg are widely used by investors. In addition, Bloomberg Beta
2213 coefficients can be calculated on any given day, which makes them quicker to reflect
2214 important changes in market conditions than those Betas published by Value Line. Both
2215 the Bloomberg and Value Line Beta coefficients have increased sharply since February
2216 2020, which appropriately reflects the higher correlation between utility stocks and the
2217 broader market noted by Dr. Woolridge.¹⁶²

2218 **Q. What MRP does Dr. Woolridge use in his CAPM analysis?**

2219 A. Dr. Woolridge estimates the MRP as being in the range of 4.00 percent to 6.00 percent.
2220 From within that range, he chooses an MRP of 6.00 percent.¹⁶³

2221 **Q. What is the basis for Dr. Woolridge's MRP of 6.00 percent?**

2222 A. Dr. Woolridge presents a significant amount of information about the MRP; however,
2223 he does not explain how he weighs this information when he selects an MRP of 6.00
2224 percent. Dr. Woolridge summarizes historical estimates of the MRP that range from
2225 4.40 percent to 6.43 percent, but he is somewhat dismissive of historical data because
2226 ex-post returns are not the same as ex-ante expectations, MRPs can change over time,

¹⁶² *Id.*, at 51-52.

¹⁶³ *Id.*, at 62.

2227 and market conditions can change such that historical returns are poor estimates of
2228 future returns.¹⁶⁴

2229 Dr. Woolridge also presents the results of several surveys that have been
2230 published since January 2010. The median MRP reported in those surveys is 5.13
2231 percent.¹⁶⁵ In particular, Dr. Woolridge highlights a March 2020 survey conducted by
2232 Professor Pablo Fernandez which found that the mean MRP for the U.S. was 5.6
2233 percent,¹⁶⁶ and the MRP calculated by Professor Damodaran, which was 5.65 percent
2234 in July 2020 and has primarily been in the range of 5.0 percent to 6.0 percent since
2235 2010.¹⁶⁷ Finally, Dr. Woolridge cites Duff & Phelps, which has recommended MRPs
2236 in the range of 5.0 percent to 6.0 percent over the past decade and recently raised its
2237 MRP for the U.S. to 6.0 percent.¹⁶⁸

2238 **Q. Why do you disagree with Dr. Woolridge's MRP estimate of 6.00 percent?**

2239 A. Given the current low yields on Treasury bonds, and the inverse relationship between
2240 interest rates and the MRP that is shown in my Bond Yield Plus Risk Premium analysis,
2241 Dr. Woolridge's MRP estimate of 6.00 percent is understated. First, from a practical
2242 standpoint, the results of his CAPM analysis are significantly below any return that has
2243 been authorized by any U.S. regulatory jurisdiction in at least 40 years. The primary
2244 reason for the unreasonably low results from Dr. Woolridge's CAPM is due to his
2245 selection of the MRP. As noted in my response to Mr. Coleman's CAPM analysis, the
2246 historical market risk premium from Duff & Phelps of 7.15 percent is based on

¹⁶⁴ *Id.*, at 55-56.

¹⁶⁵ *Id.*, at 59.

¹⁶⁶ *Id.*, at 59-60.

¹⁶⁷ *Id.*, at 60.

¹⁶⁸ *Id.*, at 61.

2247 government bond yields that are significantly higher than current levels. Therefore, the
2248 historical MRP does not reflect the inverse relationship between interest rates and the
2249 equity risk premium. The MRP used by Dr. Woolridge of 6.00 percent suggests that
2250 the expected MRP is currently 115 basis points lower than the historical average MRP
2251 of 7.15 percent.

2252 **Q. What are your concerns with the surveys that Dr. Woolridge has relied upon to**
2253 **derive his MRP range of 4.00 percent to 6.00 percent?**

2254 A. In spite of Dr. Woolridge's concern with the ability of economists to accurately forecast
2255 interest rates, he relies on investor surveys from Pablo Fernandez and research from
2256 Dr. Damodaran to develop his estimate of the MRP. It is unclear why Dr. Woolridge
2257 believes the use of surveys is appropriate for purposes of deriving the MRP in his
2258 CAPM analysis, but not appropriate in an overall assessment of economic conditions
2259 and their effect on the models used to estimate the cost of equity.

2260 **Q. What MRP is suggested by the survey results summarized by Dr. Woolridge?**

2261 A. The March 2020 survey by Pablo Fernandez reports a mean MRP for the U.S. of 5.6
2262 percent. However, it is important to note that Dr. Fernandez collected data from 2,156
2263 respondent regarding the MRP for the U.S., which resulted in a wide range of estimated
2264 MRPs from 2.0 percent to 13.4 percent. Given the wide dispersion of responses,
2265 investors' required returns can vary substantially. Thus, taking the average of a sample
2266 of investors' required returns may not be a reasonable assumption when calculating the
2267 required return of the market. In fact, Dr. Fernandez cautioned against this approach:

2268 We can find out the REP [Required Equity Premium] and the EEP
2269 [Expected Equity Premium] of an investor by asking him,
2270 although for many investors the REP is not an explicit parameter
2271 but, rather, it is implicit in the price they are prepared to pay for

2272 the shares. However, it is not possible to determine the REP for
2273 the market as a whole, because it does not exist: even if we knew
2274 the REPs of all the investors in the market, it would be
2275 meaningless to talk of a REP for the market as a whole. There is a
2276 distribution of REPs and we can only say that some percentage of
2277 investors have REPs contained in a range. The average of that
2278 distribution cannot be interpreted as the REP of the market nor as
2279 the REP of a representative investor.¹⁶⁹

2280 **Q. Do you have any concerns with the implied MRPs that Dr. Woolridge has cited to**
2281 **support his 6.00 percent MRP?**

2282 A. Yes. As discussed above, Dr. Woolridge cites to implied MRPs calculated by Professor
2283 Damodaran and Duff & Phelps as support for the 6.00 percent MRP. However, as
2284 shown in Figure 18, the implied market return for the sources cited by Dr. Woolridge
2285 range from 6.31 percent to 8.50 percent. These returns, while not only unreasonably
2286 low, are inconsistent with the results produced by Dr. Woolridge's DCF analysis. As
2287 Dr. Woolridge notes, the Constant Growth DCF result for his Electric utility proxy
2288 group was 8.70 percent. Since Dr. Woolridge has acknowledged that his Electric proxy
2289 group is less risky than the market by relying on a Beta coefficient of 0.85 in his CAPM
2290 analysis, it would stand to reason that the market returns that Dr. Woolridge has relied
2291 on to select his MRP would be higher than his Constant Growth DCF results for a group
2292 of electric utilities. However, as shown in Figure 18, the market returns cited by Dr.
2293 Woolridge range from 219 basis points below his Constant Growth DCF result to 20
2294 basis points below his Constant Growth DCF result. This highlights an important
2295 inconsistency that the Commission should consider between the inputs used to calculate
2296 Dr. Woolridge's CAPM analysis and his Constant Growth DCF analysis.

¹⁶⁹ Pablo Fernandez, Eduardo de Appellaniz, and Javier F. Acín, "Market Risk Premium and Risk-Free Rate used for 81 countries in 2020: a survey," IESE Business School, (March 2020), at 10.

2297

Figure 18: Implied Market Returns cited by Dr. Woolridge

Source	Implied	Risk-Free Rate	Implied Market
Professor Damodaran ¹⁷⁰	5.65%	0.66%	6.31%
Duff & Phelps	6.00%	2.50%	8.50%

2298 **Q. What is Dr. Woolridge’s concern with the MRPs you have used in your CAPM**
2299 **analysis?**

2300 A. Dr. Woolridge expresses concern that my forward-looking MRP is over-stated because
2301 it is developed using the expected return for the S&P 500 based on forecasted EPS
2302 growth rates. In particular, Dr. Woolridge testifies: that “a long-term EPS growth rate
2303 of 11.60 percent is inconsistent with both historic and projected economic and earnings
2304 growth in the U.S.”¹⁷¹

2305 **Q. Does Dr. Woolridge agree that the MRP can be estimated based on expected**
2306 **returns for the S&P 500?**

2307 A. Yes. According to Dr. Woolridge: “The market risk premium is equal to the expected
2308 return on the stock market (e.g., the expected return on the S&P 500, $E(R_m)$ minus the
2309 risk-free rate of interest (R_f).”¹⁷² This is consistent with the approach I have used to
2310 estimate the forward-looking MRP in my CAPM analysis.

2311 **Q. Do you agree with Dr. Woolridge that the forward-looking MRP in your CAPM**
2312 **analysis is “excessive” because it relies on EPS growth rates from Wall Street**
2313 **analysts for the S&P 500?**¹⁷³

2314 A. No, I do not. Dr. Woolridge supports this assertion by arguing that the EPS growth rate
2315 for the S&P 500 of 11.60 percent is significantly higher than long-term EPS growth for

¹⁷⁰ Professor Aswath Damodaran’s implied MRP and risk-free rate for July 2020 were included in Figure 18.

¹⁷¹ Direct Testimony of Dr. J. Randall Woolridge, at 82.

¹⁷² *Id.*, at 55.

¹⁷³ *Id.*, at 82-83.

2316 the S&P 500 and more recent trends in GDP growth, as well as projections of GDP
2317 growth.¹⁷⁴ However, the forecasted growth rate used in my CAPM analysis is a market-
2318 based growth rate provided by S&P for the companies in the S&P 500 Index. In other
2319 words, 11.60 percent is not my estimate of the expected growth rate; it is based on
2320 forecasted earnings growth rates for the companies in the S&P 500 as reported by S&P.
2321 Dr. Woolridge supports the use of the Constant Growth DCF model to estimate the cost
2322 of equity for RMP and relies primarily on projected EPS growth rates. However, he
2323 dismisses the expected EPS growth rate for the S&P 500 as overstated, even though
2324 the model upon which he relies assumes that investors set stock prices based on
2325 expectations for future growth in dividends and share price. As discussed previously in
2326 my rebuttal testimony, recent academic research has found that analyst bias has been
2327 reduced or eliminated, if it ever existed, after the financial market reforms of the early
2328 2000s.

2329 **Q. Is there support for the use of a forward-looking MRP in the CAPM analysis?**

2330 A. Yes. As noted in my response to Mr. Coleman, the Staff in both Maine and Minnesota
2331 have endorsed the use of a forward-looking MRP, and FERC has also relied on a
2332 forward-looking MRP in Opinion Nos. 569 and 569-A.

2333 **Q. What is your conclusion regarding the appropriate MRP in the context of current**
2334 **market data?**

2335 A. It is reasonable to expect that the uncertainty in current market conditions would result
2336 in a MRP that is higher than the historical average MRP. Dr. Woolridge's estimated
2337 MRP of 6.00 percent is substantially lower than: (1) the historical MRP using large

¹⁷⁴ *Id.*, at 82.

2338 company stocks (7.15 percent); and (2) the forward-looking MRP in my CAPM
2339 analysis, which was derived using forecasted total returns for the S&P 500 less the risk-
2340 free rate (between 10.85 percent and 12.49 percent). Dr. Woolridge's MRP of 6.00
2341 percent, when added to the 30-day average yield on the 30-year Treasury as of July 31,
2342 2020 of 1.34 percent, suggests that market participants are expecting a total return for
2343 equities of 7.34 percent. By contrast, the long-term average total return for large
2344 company stocks since 1926, as reported by Duff & Phelps, has been 12.09 percent, or
2345 approximately 475 basis points higher than Dr. Woolridge's MRP estimate assumes.
2346 For these reasons, I continue to support the method I used to estimate the MRP.

2347 **Q. Please summarize Dr. Woolridge's concerns with the Empirical CAPM analysis.**

2348 A. Dr. Woolridge claims that the ECAPM has not been empirically or theoretically
2349 validated in refereed journals. In addition, Dr. Woolridge also states that he is not aware
2350 of any tests of the ECAPM that use adjusted Betas such as those used in my analysis,
2351 and that adjusting Betas addresses the empirical issues with the CAPM.¹⁷⁵

2352 **Q. Do you agree with Dr. Woolridge that it is not appropriate to use adjusted Betas
2353 in the ECAPM?**

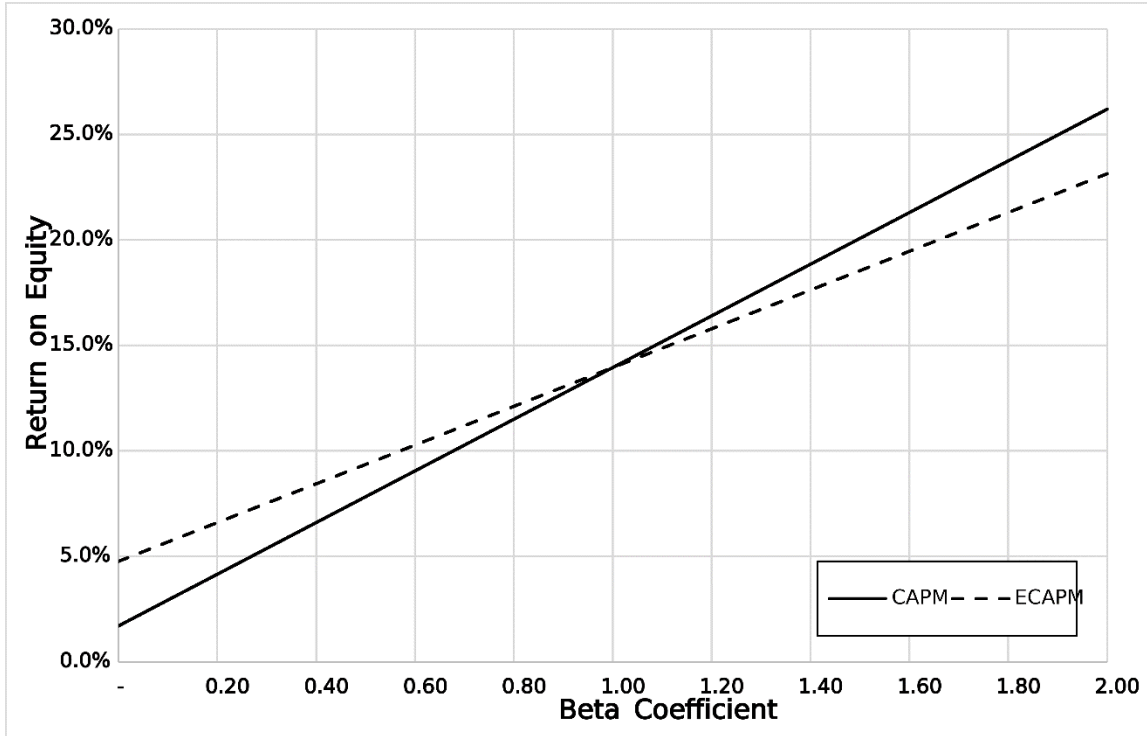
2354 A. No, I do not. The purpose of adjusting Beta is to account for the tendency of Beta to
2355 trend back over time to the market Beta of 1.00. As noted by Dr. Woolridge, the Betas
2356 published by Value Line and Bloomberg include this adjustment, which was first
2357 proposed by Marshall E. Blume in 1975.¹⁷⁶ The use of adjusted Betas in the CAPM is
2358 important because if Beta trends towards 1.00, as Dr. Blume noted, then the adjusted

¹⁷⁵ Direct Testimony of Dr. Randall Woolridge, at 77-78.

¹⁷⁶ Blume, Marshall E. "Betas And Their Regression Tendencies." *The Journal of Finance*, vol. 30, no. 3, 1975, pp. 785-795.

2359 Beta will be more reflective of the Beta that can be expected over the near-term. This
2360 is equally important in the specification of the CAPM in this case since we are
2361 estimating the cost of equity for RMP over the near-term or the period when RMP's
2362 rates will be in effect.

2363 The purpose of the ECAPM is to account for the fact that the risk-return
2364 relationship is flatter than what is estimated by the CAPM, not for the tendency of Beta
2365 to trend back to 1.00. While Beta is not observable and must be estimated, the theory
2366 behind the ECAPM is that even if the true value of a stock's Beta were observable, the
2367 CAPM would understate the return for stocks with betas less than 1.00 and overstate
2368 the results for stocks with betas greater than 1.00. In Figure 19, I have calculated the
2369 risk-return relationship of the CAPM and ECAPM analyses included in my rebuttal
2370 testimony. In the example, I rely on the near-term projection of the 30-year Treasury
2371 Bond yield of 1.70 percent as the risk-free rate and the market return of 13.95 percent
2372 as shown in Exhibit___RMP (AEB-3R). I then estimate the returns using different
2373 Betas. As shown in Figure 19, the slope of the ECAPM is flatter than the CAPM,
2374 indicating that the CAPM is likely understating the return for companies with Betas
2375 less than 1.00 and overstating the return for companies with Betas greater than 1.00.
2376 In other words, the adjusted Beta provides a better approximation of the expected Beta
2377 over the near-term, while the ECAPM is adjusting for the fact that the actual risk-return
2378 relationship observed is flatter than is predicted by the CAPM. Therefore, contrary to
2379 Dr. Woolridge's assertion, the purpose of each adjustment is different and applying
2380 both adjustments in the ECAPM is not duplicative.

Figure 19: CAPM and ECAPM Return Estimates

2382 **Q. Are you aware of any academic studies that have used adjusted betas to estimate**
 2383 **the ECAPM?**

2384 A. Yes. Robert Litzenger, Krishna Ramaswamy, and Howard Sosin published an
 2385 article titled “On the CAPM Approach to the Estimation of a Public Utility’s Cost of
 2386 Equity Capital,” which studied the ability of the CAPM to estimate the returns for
 2387 utilities.¹⁷⁷ The authors found that the CAPM tends to understate the return for stocks
 2388 such as utilities, which have a Beta less than 1.0. To develop the analysis, Litzenger,
 2389 et al. utilized both adjusted and raw Beta. In both cases, the CAPM understated the
 2390 return for utilities with Betas less than 1.0. Therefore, contrary to Dr. Woolridge’s

¹⁷⁷ Litzenger, Robert, et al. “On the CAPM Approach to the Estimation of A Public Utility’s Cost of Equity Capital.” *The Journal of Finance*, vol. 35, no. 2, 1980, pp. 369–383.

2391 assertion, this study shows that the adjustment to Beta and the use of the ECAPM are
2392 not duplicative but rather account for two different factors in the CAPM.

2393 Similarly, Stephane Chretien and Frank Coggins published a study in 2011
2394 titled “Cost of Equity for Energy Utilities: Beyond the CAPM”, where they studied the
2395 CAPM and its ability to estimate the risk premium for the utility industry in particular
2396 subgroups of utilities. The article considered the CAPM, the Fama-French three-factor
2397 model and a model similar to the ECAPM used in my direct testimony. In the article,
2398 the ECAPM relied on adjusted betas, which were adjusted using the same approach
2399 applied by Value Line. As Chretien and Coggins show, the ECAPM significantly
2400 outperformed the traditional CAPM at predicting the observed risk premium for the
2401 various utility subgroups.¹⁷⁸

2402 Finally, one of Dr. Woolridge’s concern with the ECAPM analysis is addressed
2403 directly by Dr. Roger Morin in his 2006 text New Regulatory Finance as follows:

2404 Some have argued that the ECAPM is inconsistent with the use of
2405 adjusted betas, such as those supplied by Value Line and
2406 Bloomberg. This is because the reason for using the CAPM is to
2407 allow for the tendency of betas to regress toward the mean value
2408 of 1.00 over time, and since Value Line betas are already adjusted
2409 for such trend, an ECAPM analysis results in double-counting.
2410 This argument is erroneous. Fundamentally, the ECAPM is not an
2411 adjustment, increase or decrease, in beta. This is obvious from the
2412 fact that the expected return on high beta securities is actually
2413 lower than that produced by the CAPM estimate. The ECAPM is
2414 a formal recognition that the observed risk-return tradeoff is flatter
2415 than predicted by the CAPM based on myriad empirical evidence.
2416 The ECAPM and the use of adjusted betas comprised two separate
2417 features of asset pricing. Even if a company’s beta is estimated
2418 accurately, the CAPM still understates the return for low-beta
2419 stocks. Even if the ECAPM is used, the return for low-beta
2420 securities is understated if the betas are understated. Referring
2421 back to Figure 6-1, the ECAPM (vertical axis) is a return

¹⁷⁸ Chrétien, Stéphane, and Frank Coggins. “Cost Of Equity For Energy Utilities: Beyond The CAPM.” *Energy Studies Review*, Vol. 18, No. 2, 2011.

2422 adjustment and not a beta (horizontal axis) adjustment. Both
2423 adjustments are necessary.¹⁷⁹

2424 **Q. Are you aware of any state commissions that have accepted the use of the**
2425 **ECAPM?**

2426 A. Yes, I am. Both the New York Public Service Commission (“NYPSC”) and the
2427 Montana Public Service Commission (“Montana PSC”) have accepted the ECAPM
2428 analysis with the use of adjusted beta coefficients in establishing the authorized ROE
2429 for regulated utilities. In New York, the NYPSC gives equal weight to the CAPM and
2430 ECAPM (which it refers to as the “Zero Beta” CAPM) results, while in Montana, the
2431 Montana PSC has expressed preference for the ECAPM analysis.¹⁸⁰

2432 Further, with respect to the use of adjusted betas in the ECAPM, the Montana
2433 PSC noted:

2434 Hill asserts that the use of the ECAPM with the use of adjusted
2435 betas is inappropriate as both serve to lower the slope of the
2436 Capital Market Line. Test. Hill 65. However, the Commission is
2437 persuaded by Morin’s representation that “[t]he ECAPM and the
2438 use of adjusted betas comprise two separate features of asset
2439 pricing. Even if a company’s beta is estimated accurately, the
2440 CAPM still understates the return for low-beta stocks.” See Morin,
2441 Roger A. “Chapter 6: Alternative Asset Pricing Models.” New
2442 Regulatory Finance Vienna: Public Utilities Reports, Inc.
2443 2006.191. The Commission agrees with Scheig that the issue
2444 should be remedied by adopting the ECAPM, including his α
2445 factor of 0.25, which is intended to approximate the α effect
2446 identified by the academic literature reviewed in Morin’s
2447 textbook.¹⁸¹

¹⁷⁹ Morin, Roger A., New Regulatory Finance, Public Utilities Report, Inc. (2006), at 191.

¹⁸⁰ Docket No. D2017.9.80, Order No. 7575c, IN THE MATTER OF the Joint Application for Approval to Change and Establish Natural Gas Delivery Rates for Energy West Montana, Inc. and Cut Bank Gas Company (Sep. 26, 2018), at 46.

¹⁸¹ Morin, Roger A., New Regulatory Finance, Public Utilities Report, Inc. (2006), at 42.

2448 **E. Bond Yield Plus Risk Premium Method**

2449 **Q. Please summarize Dr. Woolridge's concerns with your Risk Premium analysis.**

2450 A. Dr. Woolridge has expressed several concerns with my Bond Yield Plus Risk Premium
2451 analysis, including: (1) that I have used historical authorized ROEs and Treasury yields
2452 and applied the resulting risk premium to projected Treasury yields; (2) that the analysis
2453 is a gauge of regulatory commission behavior, not investor behavior; and (3) that my
2454 analysis includes returns from settled as well as litigated rate cases.¹⁸²

2455 **Q. Is Dr. Woolridge's concern about the use of projected Treasury yields valid?**

2456 A. No. As shown in Exhibit RMP____(AEB-7) to my direct testimony, my Risk Premium
2457 analysis determines the appropriate risk premium based on the relationship between
2458 historic authorized ROEs for electric utilities and bonds yields. I disagree with Dr.
2459 Woolridge that it is incorrect to apply the historical risk premium from this analysis to
2460 projected Treasury yields in order to estimate the ROE at specified interest rates. My
2461 Risk Premium analysis is supported by a regression equation that evaluates the
2462 relationship between bond yields and the equity risk premium over time. The regression
2463 equation has an R² of 0.81, meaning that the regression can be used to predict the equity
2464 risk premium at different levels of interest rates. In summary, my Bond Yield Plus Risk
2465 Premium analysis is designed to use the historical relationship between bond yields and
2466 the equity risk premium to predict how investors will react to changes in interest rates.

¹⁸² Direct Testimony of Dr. J. Randall Woolridge, at 86-87.

2467 **Q. What is your response to Dr. Woolridge's concern that your Risk Premium**
2468 **analysis is a gauge of regulatory commission behavior rather than investor**
2469 **behavior?**

2470 A. While my Risk Premium analysis is based on authorized ROEs and the corresponding
2471 Treasury yields at the time the regulatory decisions were issued, I believe that investors
2472 are informed by allowed ROEs from hundreds of rate case decisions to frame their
2473 return expectations. As Dr. Woolridge observes, one of the fundamental principles in
2474 setting a just and reasonable return is that the return must be comparable to returns
2475 available to investors in companies with similar risk. In that regard, the authorized
2476 returns for other electric utilities are a relevant consideration for investors. My Risk
2477 Premium analysis simply shows what those returns are in relation to the risk-free rate,
2478 so that it is possible to use historical returns to estimate future returns at various
2479 Treasury bond yields.

2480 **Q. Do you share Dr. Woolridge's concern that your Risk Premium analysis includes**
2481 **settled rate case decisions?**

2482 A. No, I do not. In order to test Dr. Woolridge's premise that the returns authorized in
2483 settled rate decisions are different than litigated rate decisions, I modified my Risk
2484 Premium analysis for electric utilities in my direct testimony to include only litigated
2485 cases. Based on that analysis, as shown in Exhibit RMP___(AEB-11R), the resulting
2486 ROE estimate ranges from 9.31 percent to 10.06 percent, with an average of 9.59
2487 percent, as compared with a range from 9.33 percent to 10.04 percent and an average
2488 of 9.60 percent for both litigated and settled cases. As such, there is no basis for Dr.

2489 Woolridge’s concern that the inclusion of settled rate case decisions affected my Risk
2490 Premium analysis.

2491 **Q. Have other regulators considered the results of the Bond Yield Plus Risk Premium**
2492 **analysis when determining the authorized ROE?**

2493 A. Yes. As discussed previously in my rebuttal testimony, on May 21, 2020, FERC issued
2494 Opinion No. 569-A in which FERC determined that it would place equal weighting on
2495 the results of the DCF, CAPM and Risk Premium methodologies for electric
2496 transmission companies.¹⁸³ In addition, state regulators have also considered the
2497 results of a Risk Premium analysis. For example, in recent Orders for Minnesota Power
2498 (Docket No. E-015/GR-16-664), Otter Tail Power Company (Docket No. E-017/GR-
2499 15-1033) and Minnesota Energy Resources Corporation (Docket No. G011/GR-17-
2500 563), the Minnesota Public Utilities Commission (“MPUC”) relied on the results of the
2501 Risk Premium analysis in addition to the CAPM to check the reasonableness of the
2502 DCF model results.¹⁸⁴

2503 **Q. What is your conclusion regarding the Risk Premium analysis?**

2504 A. I continue to support the use of the Risk Premium analysis to corroborate the
2505 reasonableness of my DCF and CAPM results.

¹⁸³ Federal Energy Regulatory Commission, Opinion No. 569-A, May 21, 2020, at para 2.

¹⁸⁴ Docket No. E-015/GR-16-664, Findings of Fact, Conclusions, and Order, at 61; Docket No. E-017/GR-15-1033, Findings of Fact, Conclusions, and Order, at 54; Docket No. G011/GR-17-563, Findings of Fact, Conclusions and Order, at 27.

2506 **F. Expected Earnings Analysis**

2507 **Q. Please summarize Dr. Woolridge’s position regarding the Expected Earnings**
2508 **analysis presented in your direct testimony.**

2509 A. According to Dr. Woolridge, there are a number of significant issues with the Expected
2510 Earnings approach, including 1) it does not measure the market cost of equity capital;
2511 2) changes in ROE ratios do not track capital market conditions; 3) the approach is
2512 circular; 4) the proxy companies’ projected ROEs reflect earnings on business activities
2513 that are not representative of RMP’s rate-regulated utility operations; and 5) the Value
2514 Line data used to develop the Expected Earnings analysis is biased upward and reflects
2515 the views of only one analyst.¹⁸⁵

2516 **Q. What is your response to Dr. Woolridge’s concerns?**

2517 A. The Expected Earnings approach provides an expected return for like-risk companies,
2518 which is a core strength of the model and consistent with the basic tenets of *Hope*,
2519 which requires that “the return to the equity owner should be commensurate with
2520 returns on investments in other enterprises having corresponding risks.” Arguably, in
2521 deciding between companies of like risk, an investor would consider both current
2522 market valuations and the value of the expected return on book value. Further, in
2523 developing his sustainable growth rates for the DCF model, Dr. Woolridge assumes the
2524 reasonableness of the projected returns on equity from Value Line, which are the same
2525 returns that he dismisses as unreliable and biased in the Expected Earnings analysis.

¹⁸⁵ Direct Testimony of Dr. J. Randall Woolridge, at 88-90.

2526 **G. Proposal to Impute Capital Structure**

2527 **Q. Please summarize Dr. Woolridge's proposed adjustment to RMP's capital**
2528 **structure.**

2529 A. Dr. Woolridge's primary recommendation is to impute a capital structure consisting of
2530 50.00 percent common equity, 49.99 percent long-term debt and 0.01 percent preferred
2531 equity, as compared to the capital structure proposed by RMP consisting of 53.67
2532 percent common equity, 46.32 percent long-term debt and 0.01 percent preferred
2533 equity.¹⁸⁶ Alternatively, Dr. Woolridge argues that if the Commission adopts the
2534 Company's proposed capital structure, the authorized ROE should be reduced from
2535 9.00 percent to 8.75 percent. As support for his recommendation, Dr. Woolridge states
2536 that the median equity ratio for his Electric proxy group was 44.0 percent and for my
2537 proxy group was 43.6 percent.¹⁸⁷ On that basis, he concludes that an imputed capital
2538 structure of 50.00 percent common equity, 49.99 percent long-term debt and 0.01
2539 percent preferred equity is more appropriate for RMP.

2540 **Q. Do you have any concerns with the analysis of proxy company capital structures**
2541 **that Dr. Woolridge relies on?**

2542 A. Yes. As shown page 1 of Exhibit JRW-2, the data relied upon by Dr. Woolridge for his
2543 analysis of the proxy company capital structures is reported at the holding company
2544 level. As such, Dr. Woolridge's analysis includes corporate-level debt that is not part
2545 of the regulated or financial capital structure of the operating utilities. The relevant
2546 capital structure for comparison purposes is at the operating company level, not the
2547 holding company. The Commission in this case will be setting the capital structure for

¹⁸⁶ Direct Testimony of Dr. J. Randall Woolridge, at Exhibit JRW-3.

¹⁸⁷ *Id.*, at 26.

2548 RMP, the operating company, which will be used to finance investments in rate base
2549 that provides electric service to customers.

2550 Exhibit RMP___(AEB-11) provides the actual capital structures for the electric proxy
2551 companies at the operating level. As shown, the average equity ratio for the electric
2552 proxy group companies is 52.73 percent, which is only slightly lower than the equity
2553 ratio proposed by the Company.

2554 **Q. What effect does the TCJA have on the appropriate capital structure for RMP?**

2555 A. As discussed in my direct testimony, the TCJA places additional pressure on utility
2556 operating company cash flows and has been viewed negatively by credit rating
2557 agencies.¹⁸⁸ All three rating agencies have commented on the potential negative
2558 implications for utilities from the loss of bonus depreciation and the reduction in taxes
2559 collected, both of which affect utility cash flows. As also discussed in my direct
2560 testimony, in the first quarter of 2018, the credit rating agencies issued reports
2561 identifying this risk factor and suggesting mitigation approaches that included
2562 increasing the authorized ROE or the equity ratio of utility operating subsidiaries.¹⁸⁹
2563 Moody's has since downgraded the credit rating of several utilities due to concerns
2564 about cash flow metrics. The heightened concern from rating agencies highlights the
2565 importance of considering the equity ratios of the utility operating subsidiaries as the
2566 appropriate benchmark to be used in determining the equity ratio for RMP in this
2567 proceeding.

¹⁸⁸ Direct Testimony of Ann E. Bulkley, at 29-31.

¹⁸⁹ *Id.*

2568 **Q. What are your conclusions with respect to the Company’s proposed capital**
2569 **structure?**

2570 A. The Company’s proposed capital structure is consistent with the range of equity ratios
2571 at the operating company level for the electric companies in my proxy group, and
2572 consistent with the credit rating agencies’ guidance for addressing the risks related to
2573 the TCJA. For those reasons, I believe that the equity ratio proposed by RMP and
2574 agreed to by the Division over the rate period is reasonable.

2575 **VIII. RESPONSE TO WALMART WITNESS MR. CHRISS**

2576 **Q. Please summarize the ROE testimony of Mr. Chriss.**

2577 A. Mr. Chriss does not conduct an ROE analysis and does not provide a specific ROE
2578 recommendation for RMP in this proceeding. Rather, Mr. Chriss urges the Commission
2579 to consider the effect on the Company’s revenue requirement and customer rates of the
2580 proposed ROE. By way of evidence, Mr. Chriss provides data from Regulatory
2581 Research Associates on authorized returns for electric utilities in other jurisdictions
2582 from 2017-2020. Specifically, Mr. Chriss provides average returns in each year for all
2583 electric utilities and for integrated electric utility companies.¹⁹⁰ The comparable return
2584 data provided by Mr. Chriss is consistent with data I used to create Figure 2 in my
2585 rebuttal testimony. Mr. Chriss notes that my original ROE recommendation of 10.20
2586 percent for RMP, which is within the range of results presented in my direct testimony,
2587 exceeds the national average authorized ROE for integrated electric utilities from 2017-
2588 2020 of 9.73 percent.

¹⁹⁰ Direct Testimony of Steve W. Chriss, at 7.

2589 **Q. What is your response to Mr. Chriss' testimony?**

2590 A. With respect to Mr. Chriss' observation that the recommended ROE for RMP is higher
2591 than returns authorized by this Commission and other regulatory jurisdictions across
2592 the nation, while I agree with Mr. Chriss that recently authorized ROEs are a useful
2593 benchmark that investors use to develop their return requirements, I also believe that
2594 current and expected economic and capital market conditions need to be considered to
2595 understand investors' required return on a forward-looking basis. As shown in Figure
2596 8, the average P/E ratio for the companies in the proxy group has reached historically
2597 high levels, indicating that current valuations may not be sustainable. Value Line is
2598 projecting that the P/E ratios for the companies in the proxy group will decline from
2599 current levels over the period from 2023-2025. This projected decline in utility share
2600 prices results in a corresponding increase in the dividend yields of these utility
2601 companies and thus ROE estimates from models such as the DCF also increase.
2602 Therefore, it is reasonable to expect that ROE awards and investors' return
2603 requirements will increase from current levels. Further, if the Commission finds
2604 recently authorized ROEs to be a useful benchmark in this proceeding, the Company's
2605 updated ROE request of 9.80 percent is within the range of authorized ROEs shown in
2606 Figure 2 and near the national average ROE for integrated electric utilities since
2607 January 2018.

2608 **IV. CONCLUSIONS AND RECOMMENDATIONS**

2609 **Q. Please summarize your conclusions and recommendations.**

2610 A. The range of reasonable ROE results for the proxy group companies remains between
2611 9.75 percent and 10.25 percent. The Company has decided to reduce its requested ROE

2612 from 10.20 percent to 9.80 percent. Based on my ROE analysis and the company-
2613 specific risks of RMP relative to the proxy group, the Company's requested ROE of
2614 9.80 percent is reasonable, if not conservative. An authorized ROE at this level
2615 balances the interests of RMP's customers and shareholders, is comparable to the
2616 authorized returns for similarly-situated electric utilities, maintains the Company's
2617 financial integrity, and enables RMP to attract capital on reasonable terms and
2618 conditions.

2619 **Q. What factors support RMP's requested ROE in this case?**

2620 A. Based on my updated analyses, I conclude that the Company's requested ROE of 9.80
2621 percent is reasonable, if not conservative, given the updated range of results. A return
2622 at this level is:

- 2623 1) Supported by the analyses contained in my direct testimony and updated
2624 in my rebuttal testimony;
- 2625 1) Consistent with current and prospective financial market conditions;
- 2626 2) Supported by the methodologies considered by the Commission and other
2627 regulatory jurisdictions;
- 2628 3) Consistent with the range of ROEs awards for integrated electric utilities
2629 in other state jurisdictions;
- 2630 4) Considers the unique business and operating risks of RMP in Utah; and
- 2631 5) Will support RMP's ability to attract capital to finance investments at
2632 reasonable rates, which will provide long-term benefits to ratepayers by
2633 limiting the long-term cost of capital.

2634 **Q. What is your recommendation with respect to the capital structure?**

2635 A. RMP's proposed capital structure of 53.67 percent common equity, 46.32 percent long-
2636 term debt and 0.01 percent preferred equity is reasonable relative to the operating
2637 utilities held by the proxy group companies and takes into consideration the effect of
2638 the TCJA on the cash flows of utilities. Therefore, I recommend the Commission adopt
2639 RMP's proposed capital structure.

2640 **Q. Does this conclude your rebuttal testimony?**

2641 A. Yes, it does.

Rocky Mountain Power
Exhibit RMP__(AEB-1R)
Docket No. 20-035-04
Witness: Ann E. Bulkley

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF UTAH

ROCKY MOUNTAIN POWER

Exhibit Accompanying Rebuttal Testimony of Ann E. Bulkley

Summary of Testimony

September 2020

SUMMARY OF ROE ANALYSES RESULTS¹

Constant Growth DCF			
	Mean Low	Mean	Mean High
30-Day Average	8.54%	9.00%	9.89%
90-Day Average	8.54%	8.98%	9.86%
180-Day Average	8.43%	8.76%	9.54%
Constant Growth Average	8.50%	8.91%	9.76%
CAPM			
	Current 30-day Average Treasury Bond Yield	Near-Term Blue Chip Forecast Yield	Long-Term Blue Chip Forecast Yield
Value Line Beta	12.37%	12.42%	12.58%
Bloomberg Beta	11.63%	11.69%	11.93%
ECAPM			
Value Line Beta	12.76%	12.80%	12.92%
Bloomberg Beta	12.21%	12.26%	12.44%
Treasury Yield Plus Risk Premium			
	Current 30-day Average Treasury Bond Yield	Near-Term Blue Chip Forecast Yield	Long-Term Blue Chip Forecast Yield
Risk Premium Analysis	9.26%	9.41%	9.96%
Risk Premium Mean Result	9.54%		
Expected Earnings Analysis			
	Mean	Median	
Expected Earnings Result	10.70%	10.73%	

Notes:

[1] The analytical results included in the table reflect the results of the Constant Growth analysis excluding the results for individual companies that did not meet the minimum threshold of 7 percent.

Rocky Mountain Power
Exhibit RMP___(AEB-2R)
Docket No. 20-035-04
Witness: Ann E. Bulkley

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF UTAH

ROCKY MOUNTAIN POWER

Exhibit Accompanying Rebuttal Testimony of Ann E. Bulkley

Constant Growth DCF Model

September 2020

30-DAY CONSTANT GROWTH DCF -- RMP PROXY GROUP

Company	Annualized Dividend	Stock Price	Dividend Yield	Expected Dividend Yield	Value Line Earnings Growth	Yahoo! Finance Earnings Growth	Zacks Earnings Growth	Average Growth	All Proxy Group			With Exclusions				
									[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
ALLETE, Inc.	\$2.47	\$57.12	4.32%	4.46%	5.50%	7.00%	NA%	6.25%	9.94%	10.71%	11.48%	9.94%	10.71%	11.48%	11.48%	
Alliant Energy Corporation	\$1.52	\$49.95	3.04%	3.13%	6.50%	5.30%	5.50%	5.77%	8.42%	8.90%	9.64%	8.42%	8.90%	9.64%	9.64%	
Ameren Corporation	\$1.98	\$75.02	2.64%	2.72%	6.00%	5.85%	6.80%	6.22%	8.57%	8.94%	9.53%	8.57%	8.94%	9.53%	9.53%	
American Electric Power Company, Inc.	\$2.80	\$83.65	3.35%	3.44%	5.00%	5.82%	5.70%	5.51%	8.43%	8.95%	9.26%	8.43%	8.95%	9.26%	9.26%	
Avista Corporation	\$1.62	\$36.34	4.46%	4.55%	1.00%	6.00%	5.20%	4.07%	5.48%	8.62%	10.59%	5.48%	8.62%	10.59%	10.59%	
CMS Energy Corporation	\$1.63	\$60.46	2.70%	2.79%	7.50%	7.08%	7.00%	7.19%	9.79%	9.99%	10.30%	9.79%	9.99%	10.30%	10.30%	
Dominion Resources, Inc.	\$3.76	\$79.01	4.76%	4.86%	7.00%	2.76%	3.00%	4.25%	7.58%	9.11%	11.93%	7.58%	9.11%	11.93%	11.93%	
DTE Energy Company	\$4.05	\$109.66	3.69%	3.80%	5.00%	6.03%	5.70%	5.56%	8.79%	9.37%	9.83%	8.79%	9.37%	9.83%	9.83%	
Duke Energy Corporation	\$3.78	\$81.80	4.62%	4.72%	5.00%	3.81%	4.30%	4.37%	8.52%	9.09%	9.74%	8.52%	9.09%	9.74%	9.74%	
Entergy Corporation	\$3.72	\$98.13	3.79%	3.88%	3.00%	5.95%	5.70%	4.88%	6.85%	8.77%	9.85%	6.85%	8.77%	9.85%	9.85%	
Energy, Inc.	\$2.02	\$61.76	3.27%	3.34%	3.00%	4.10%	5.00%	4.03%	6.32%	7.37%	8.35%	6.32%	7.37%	8.35%	8.35%	
EVRG	\$2.68	\$89.76	2.99%	3.03%	3.50%	2.60%	2.60%	2.90%	5.62%	5.93%	6.54%	5.62%	5.93%	6.54%	6.54%	
IDACORP, Inc.	\$5.60	\$259.84	2.16%	2.25%	10.00%	8.17%	8.00%	8.72%	10.24%	10.97%	12.26%	10.24%	10.97%	12.26%	12.26%	
NextEra Energy, Inc.	\$2.40	\$54.28	4.42%	4.49%	1.50%	3.71%	3.40%	2.87%	5.95%	7.36%	8.21%	5.95%	7.36%	8.21%	8.21%	
NorthWestern Corporation	\$1.55	\$31.44	4.93%	5.01%	3.00%	2.40%	3.70%	3.03%	7.39%	8.04%	8.72%	7.39%	8.04%	8.72%	8.72%	
OGE Energy Corporation	\$1.48	\$88.56	3.84%	3.96%	3.50%	9.00%	NA%	6.25%	7.41%	10.21%	13.01%	7.41%	10.21%	13.01%	13.01%	
Otter Tail Corporation	\$3.13	\$77.80	4.02%	4.11%	4.00%	4.36%	4.70%	4.35%	8.10%	8.46%	8.82%	8.10%	8.46%	8.82%	8.82%	
Pinnacle West Capital Corporation	\$1.23	\$39.58	3.11%	3.20%	6.00%	5.60%	6.20%	5.93%	8.79%	9.13%	9.40%	8.79%	9.13%	9.40%	9.40%	
PNM Resources, Inc.	\$1.54	\$42.62	3.61%	3.70%	4.00%	4.45%	5.30%	4.58%	7.69%	8.28%	9.01%	7.69%	8.28%	9.01%	9.01%	
Portland General Electric Company	\$1.66	\$25.74	6.45%	6.54%	2.50%	2.90%	NA%	2.70%	9.03%	9.24%	9.44%	9.03%	9.24%	9.44%	9.44%	
PPL Corporation	\$2.56	\$53.57	4.78%	4.87%	3.00%	4.53%	4.00%	3.84%	7.85%	8.71%	9.42%	7.85%	8.71%	9.42%	9.42%	
Southern Company	\$1.72	\$65.24	2.64%	2.72%	6.00%	6.10%	6.10%	6.07%	8.72%	8.78%	8.82%	8.72%	8.78%	8.82%	8.82%	
Xcel Energy Inc.																
MEAN			3.80%	3.89%	4.61%	5.16%	5.15%	4.97%	7.98%	8.86%	9.73%	7.98%	8.86%	9.73%	9.89%	9.89%

Notes

- [1] Source: Bloomberg Professional
- [2] Source: Bloomberg Professional, equals 30-day average as of July 31, 2020
- [3] Equals [1] / [2]
- [4] Equals [3] x (1 + 0.50 x [8])
- [5] Source: Value Line Investment Survey
- [6] Source: Yahoo! Finance
- [7] Source: Zacks
- [8] Equals Average ([5], [6], [7])
- [9] Equals [3] x (1 + 0.50 x Minimum ([5], [6], [7]) + Minimum ([5], [6], [7]))
- [10] Equals [4] + [8]
- [11] Equals [3] x (1 + 0.50 x Maximum ([5], [6], [7]) + Maximum ([5], [6], [7]))
- [12] Equals [9] if greater than 7.00%
- [13] Equals [10] if greater than 7.00%
- [14] Equals [11] if greater than 7.00%

90-DAY CONSTANT GROWTH DCF -- RMP PROXY GROUP

Company	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]
	Annualized Dividend	Stock Price	Dividend Yield	Expected Dividend Yield	Value Line Earnings Growth	Yahoo! Finance Earnings Growth	Zacks Earnings Growth	Average Growth	Low ROE	Mean ROE	High ROE	Low ROE	Mean ROE	High ROE
ALLETE, Inc.	\$2.47	\$57.32	4.31%	4.44%	5.50%	7.00%	NA%	6.25%	9.93%	10.69%	11.46%	9.93%	10.69%	11.46%
Alliant Energy Corporation	\$1.52	\$49.15	3.09%	3.18%	6.50%	5.30%	5.50%	5.77%	8.47%	8.95%	9.69%	8.47%	8.95%	9.69%
Ameren Corporation	\$1.98	\$73.61	2.69%	2.77%	6.00%	5.85%	6.80%	6.22%	8.62%	8.99%	9.58%	8.62%	8.99%	9.58%
American Electric Power Company, Inc.	\$2.80	\$82.40	3.40%	3.49%	5.00%	5.82%	5.70%	5.51%	8.48%	9.00%	9.32%	8.48%	9.00%	9.32%
Avista Corporation	\$1.62	\$38.99	4.15%	4.24%	1.00%	6.00%	5.20%	4.07%	5.18%	8.31%	10.28%	5.18%	8.31%	10.28%
CMS Energy Corporation	\$1.63	\$68.78	2.77%	2.87%	7.50%	7.08%	7.00%	7.19%	9.87%	10.07%	10.38%	9.87%	10.07%	10.38%
Dominion Resources, Inc.	\$3.76	\$79.25	4.74%	4.85%	7.00%	2.76%	3.00%	4.25%	7.57%	9.10%	11.91%	7.57%	9.10%	11.91%
DTE Energy Company	\$4.05	\$105.29	3.85%	3.95%	5.00%	6.03%	5.70%	5.58%	8.94%	9.53%	9.99%	8.94%	9.53%	9.99%
Duke Energy Corporation	\$3.78	\$83.69	4.52%	4.62%	5.00%	3.81%	4.30%	4.37%	8.41%	8.99%	9.63%	8.41%	8.99%	9.63%
Energy Corporation	\$3.72	\$97.64	3.81%	3.90%	3.00%	5.95%	5.70%	4.88%	6.87%	8.79%	9.87%	6.87%	8.79%	9.87%
Energy, Inc.	\$2.02	\$99.91	3.37%	3.44%	3.00%	4.10%	5.00%	4.03%	6.42%	7.47%	8.46%	6.42%	7.47%	8.46%
IDACORP, Inc.	\$2.68	\$90.33	2.97%	3.01%	3.50%	2.60%	2.60%	2.90%	5.61%	5.91%	6.52%	5.61%	5.91%	6.52%
NextEra Energy, Inc.	\$5.60	\$245.67	2.28%	2.38%	10.00%	8.17%	8.00%	8.72%	10.37%	11.10%	12.39%	10.37%	11.10%	12.39%
NorthWestern Corporation	\$2.40	\$57.13	4.20%	4.26%	1.50%	3.71%	3.40%	2.87%	5.73%	7.13%	7.99%	5.73%	7.13%	7.99%
OGE Energy Corporation	\$1.55	\$31.15	4.98%	5.05%	3.00%	2.40%	3.70%	3.03%	7.44%	8.09%	8.77%	7.44%	8.09%	8.77%
Other Tail Corporation	\$1.48	\$41.32	3.58%	3.69%	3.50%	9.00%	NA%	6.25%	7.14%	9.94%	12.74%	7.14%	9.94%	12.74%
Pinnacle West Capital Corporation	\$3.13	\$76.62	4.08%	4.17%	4.00%	4.36%	4.70%	4.35%	8.17%	8.53%	8.88%	8.17%	8.53%	8.88%
PNM Resources, Inc.	\$1.23	\$39.89	3.08%	3.17%	6.00%	5.60%	6.20%	5.93%	8.77%	9.11%	9.38%	8.77%	9.11%	9.38%
Portland General Electric Company	\$1.54	\$45.18	3.41%	3.49%	4.00%	4.45%	5.30%	4.58%	7.48%	8.07%	8.80%	7.48%	8.07%	8.80%
PPL Corporation	\$1.66	\$25.87	6.42%	6.50%	2.50%	2.90%	NA%	2.70%	9.00%	9.20%	9.41%	9.00%	9.20%	9.41%
Southern Company	\$2.56	\$55.15	4.64%	4.73%	3.00%	4.53%	4.00%	3.84%	7.71%	8.57%	9.28%	7.71%	8.57%	9.28%
Xcel Energy Inc.	\$1.72	\$63.50	2.71%	2.79%	6.00%	6.10%	6.10%	6.07%	8.79%	8.86%	8.89%	8.79%	8.86%	8.89%
MEAN			3.78%	3.86%	4.61%	5.16%	5.15%	4.97%	7.95%	8.84%	9.71%	8.54%	8.98%	9.86%

Notes

- [1] Source: Bloomberg Professional
- [2] Source: Bloomberg Professional, equals 90-day average as of July 31, 2020
- [3] Equals [1] / [2]
- [4] Equals [3] x (1 + 0.50 x [8])
- [5] Source: Value Line Investment Survey
- [6] Source: Yahoo! Finance
- [7] Source: Zacks
- [8] Equals Average ([5], [6], [7])
- [9] Equals [3] x (1 + 0.50 x Minimum ([5], [6], [7]) + Minimum ([5], [6], [7]))
- [10] Equals [4] + [8]
- [11] Equals [3] x (1 + 0.50 x Maximum ([5], [6], [7]) + Maximum ([5], [6], [7]))
- [12] Equals [9] if greater than 7.00%
- [13] Equals [10] if greater than 7.00%
- [14] Equals [11] if greater than 7.00%

180-DAY CONSTANT GROWTH DCF -- RMP PROXY GROUP

Company	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]
	Annualized Dividend	Stock Price	Dividend Yield	Expected Dividend Yield	Value Line Earnings Growth	Yahoo! Finance Earnings Growth	Zacks Earnings Growth	Average Growth	Low ROE	Mean ROE	High ROE	Low ROE	Mean ROE	High ROE
ALLETE, Inc.	\$2.47	\$67.72	3.65%	3.76%	5.50%	7.00%	NA%	6.25%	9.25%	10.01%	10.77%	9.25%	10.01%	10.77%
Alliant Energy Corporation	\$1.52	\$51.90	2.93%	3.01%	6.50%	5.30%	5.50%	5.77%	8.31%	8.78%	9.52%	8.31%	8.78%	9.52%
Ameren Corporation	\$1.98	\$75.89	2.61%	2.69%	6.00%	5.85%	6.80%	6.22%	8.54%	8.91%	9.50%	8.54%	8.91%	9.50%
American Electric Power Company, Inc.	\$2.80	\$88.42	3.17%	3.25%	5.00%	5.82%	5.70%	5.51%	8.25%	8.76%	9.08%	8.25%	8.76%	9.08%
Avista Corporation	\$1.62	\$43.64	3.71%	3.79%	1.00%	6.00%	5.20%	4.07%	4.75%	7.85%	9.82%	4.75%	7.85%	9.82%
CMS Energy Corporation	\$1.63	\$61.13	2.67%	2.76%	7.50%	7.08%	7.00%	7.19%	9.76%	9.96%	10.27%	9.76%	9.96%	10.27%
Dominion Resources, Inc.	\$3.76	\$80.75	4.66%	4.76%	7.00%	2.76%	3.00%	4.25%	7.48%	9.01%	11.82%	7.48%	9.01%	11.82%
DTE Energy Company	\$4.05	\$114.11	3.55%	3.65%	5.00%	6.03%	5.70%	5.58%	8.64%	9.22%	9.69%	8.64%	9.22%	9.69%
Duke Energy Corporation	\$3.78	\$67.60	4.32%	4.41%	5.00%	3.81%	4.30%	4.37%	8.21%	8.78%	9.42%	8.21%	8.78%	9.42%
Energy Corporation	\$3.72	\$108.59	3.43%	3.51%	3.00%	5.95%	5.70%	4.88%	6.48%	8.39%	9.48%	6.48%	8.39%	9.48%
Energy, Inc.	\$2.02	\$62.71	3.22%	3.29%	3.00%	4.10%	5.00%	4.03%	6.27%	7.32%	8.30%	6.27%	7.32%	8.30%
IDACORP, Inc.	\$2.68	\$97.50	2.75%	2.79%	3.50%	2.60%	2.60%	2.90%	5.38%	5.69%	6.30%	5.38%	5.69%	6.30%
NextEra Energy, Inc.	\$5.60	\$246.24	2.27%	2.37%	10.00%	8.17%	8.00%	8.72%	10.37%	11.10%	12.39%	10.37%	11.10%	12.39%
NorthWestern Corporation	\$2.40	\$64.53	3.72%	3.77%	1.50%	3.71%	3.40%	2.87%	5.25%	6.64%	7.50%	5.25%	6.64%	7.50%
OGE Energy Corporation	\$1.55	\$36.55	4.24%	4.31%	3.00%	2.40%	3.70%	3.03%	6.69%	7.34%	8.02%	6.69%	7.34%	8.02%
Other Tail Corporation	\$1.48	\$45.81	3.23%	3.33%	3.50%	9.00%	NA%	6.25%	6.79%	9.58%	12.38%	6.79%	9.58%	12.38%
Pinnacle West Capital Corporation	\$3.13	\$83.44	3.75%	3.83%	4.00%	4.36%	4.70%	4.35%	7.83%	8.19%	8.54%	7.83%	8.19%	8.54%
PNM Resources, Inc.	\$1.23	\$44.64	2.76%	2.84%	6.00%	5.60%	6.20%	5.93%	8.43%	8.77%	9.04%	8.43%	8.77%	9.04%
Portland General Electric Company	\$1.54	\$50.74	3.03%	3.10%	4.00%	4.45%	5.30%	4.58%	7.10%	7.69%	8.42%	7.10%	7.69%	8.42%
PPL Corporation	\$1.66	\$29.69	5.59%	5.67%	2.50%	2.90%	NA%	2.70%	8.16%	8.37%	8.57%	8.16%	8.37%	8.57%
Southern Company	\$2.56	\$59.32	4.32%	4.40%	3.00%	4.53%	4.00%	3.84%	7.38%	8.24%	8.94%	7.38%	8.24%	8.94%
Xcel Energy Inc.	\$1.72	\$63.95	2.69%	2.77%	6.00%	6.10%	6.10%	6.07%	8.77%	8.84%	8.87%	8.77%	8.84%	8.87%
MEAN			3.47%	3.55%	4.61%	5.16%	5.15%	4.97%	7.64%	8.52%	9.39%	7.64%	8.52%	9.39%

Notes

- [1] Source: Bloomberg Professional
- [2] Source: Bloomberg Professional, equals 180-day average as of July 31, 2020
- [3] Equals [1] / [2]
- [4] Equals [3] x (1 + 0.50 x [8])
- [5] Source: Value Line Investment Survey
- [6] Source: Yahoo! Finance
- [7] Source: Zacks
- [8] Equals Average ([5], [6], [7])
- [9] Equals [3] x (1 + 0.50 x Minimum ([5], [6], [7]) + Maximum ([5], [6], [7]))
- [10] Equals [4] + [8]
- [11] Equals [3] x (1 + 0.50 x Maximum ([5], [6], [7]) + Minimum ([5], [6], [7]))
- [12] Equals [9] if greater than 7.00%
- [13] Equals [10] if greater than 7.00%
- [14] Equals [11] if greater than 7.00%

Rocky Mountain Power
Exhibit RMP___(AEB-3R)
Docket No. 20-035-04
Witness: Ann E. Bulkley

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF UTAH

ROCKY MOUNTAIN POWER

Exhibit Accompanying Rebuttal Testimony of Ann E. Bulkley

CAPM

September 2020

CAPITAL ASSET PRICING MODEL -- CURRENT RISK-FREE RATE & VL BETA

CAPM: $K = R_f + \beta (R_m - R_f)$
ECAPM: $K = R_f + ((0.75 \times \beta (R_m - R_f)) + (0.25 \times (R_m - R_f)))$

Company	Ticker	[1]	[2]	[3]	[4]	[5]	[6]
		Current 30-day average of 30-year U.S. Treasury bond yield	Beta (β)	Market Return (Rm)	Market Risk Premium (Rm - Rf)	ROE (K)	ECAPM ROE
ALLETE, Inc.	ALE	1.34%	0.85	13.95%	12.60%	12.06%	12.53%
Alliant Energy Corporation	LNT	1.34%	0.80	13.95%	12.60%	11.43%	12.06%
Ameren Corporation	AEE	1.34%	0.80	13.95%	12.60%	11.43%	12.06%
American Electric Power Company, Inc.	AEP	1.34%	0.75	13.95%	12.60%	10.80%	11.58%
Avista Corporation	AVA	1.34%	0.95	13.95%	12.60%	13.32%	13.47%
CMS Energy Corporation	CMS	1.34%	0.80	13.95%	12.60%	11.43%	12.06%
Dominion Resources, Inc.	D	1.34%	0.80	13.95%	12.60%	11.43%	12.06%
DTE Energy Company	DTE	1.34%	0.90	13.95%	12.60%	12.69%	13.00%
Duke Energy Corporation	DUK	1.34%	0.85	13.95%	12.60%	12.06%	12.53%
Entergy Corporation	ETR	1.34%	0.95	13.95%	12.60%	13.32%	13.47%
Eergy, Inc.	EVRG	1.34%	1.05	13.95%	12.60%	14.58%	14.42%
IDACORP, Inc.	IDA	1.34%	0.80	13.95%	12.60%	11.43%	12.06%
NextEra Energy, Inc.	NEE	1.34%	0.85	13.95%	12.60%	12.06%	12.53%
NorthWestern Corporation	NWE	1.34%	0.90	13.95%	12.60%	12.69%	13.00%
OGE Energy Corporation	OGE	1.34%	1.05	13.95%	12.60%	14.58%	14.42%
Otter Tail Corporation	OTTR	1.34%	0.85	13.95%	12.60%	12.06%	12.53%
Pinnacle West Capital Corporation	PNW	1.34%	0.85	13.95%	12.60%	12.06%	12.53%
PNM Resources, Inc.	PNM	1.34%	0.90	13.95%	12.60%	12.69%	13.00%
Portland General Electric Company	POR	1.34%	0.85	13.95%	12.60%	12.06%	12.53%
PPL Corporation	PPL	1.34%	1.05	13.95%	12.60%	14.58%	14.42%
Southern Company	SO	1.34%	0.90	13.95%	12.60%	12.69%	13.00%
Xcel Energy Inc.	XEL	1.34%	0.75	13.95%	12.60%	10.80%	11.58%
Mean						12.37%	12.76%

Notes:

- [1] Source: Bloomberg Professional
[2] Source: Value Line
[3] Source: Exhibit RMP ___ (AEB-3R), page 4
[4] Equals [3] - [1]
[5] Equals [1] + [2] x [4]
[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- NEAR-TERM PROJECTED RISK-FREE RATE & VL BETA

CAPM: $K = R_f + \beta (R_m - R_f)$
ECAPM: $K = R_f + ((0.75 \times \beta (R_m - R_f)) + (0.25 \times (R_m - R_f)))$

Company	Ticker	[1]	[2]	[3]	[4]	[5]	[6]
		Near-term projected 30-year U.S. Treasury bond yield (Q4 2020 - Q4 2021)	Beta (β)	Market Return (Rm)	Market Risk Premium (Rm - Rf)	ROE (K)	ECAPM ROE
ALLETE, Inc.	ALE	1.70%	0.85	13.95%	12.25%	12.11%	12.57%
Alliant Energy Corporation	LNT	1.70%	0.80	13.95%	12.25%	11.50%	12.11%
Ameren Corporation	AEE	1.70%	0.80	13.95%	12.25%	11.50%	12.11%
American Electric Power Company, Inc.	AEP	1.70%	0.75	13.95%	12.25%	10.88%	11.65%
Avista Corporation	AVA	1.70%	0.95	13.95%	12.25%	13.33%	13.49%
CMS Energy Corporation	CMS	1.70%	0.80	13.95%	12.25%	11.50%	12.11%
Dominion Resources, Inc.	D	1.70%	0.80	13.95%	12.25%	11.50%	12.11%
DTE Energy Company	DTE	1.70%	0.90	13.95%	12.25%	12.72%	13.03%
Duke Energy Corporation	DUK	1.70%	0.85	13.95%	12.25%	12.11%	12.57%
Entergy Corporation	ETR	1.70%	0.95	13.95%	12.25%	13.33%	13.49%
Eergy, Inc.	EVRG	1.70%	1.05	13.95%	12.25%	14.56%	14.41%
IDACORP, Inc.	IDA	1.70%	0.80	13.95%	12.25%	11.50%	12.11%
NextEra Energy, Inc.	NEE	1.70%	0.85	13.95%	12.25%	12.11%	12.57%
NorthWestern Corporation	NWE	1.70%	0.90	13.95%	12.25%	12.72%	13.03%
OGE Energy Corporation	OGE	1.70%	1.05	13.95%	12.25%	14.56%	14.41%
Otter Tail Corporation	OTTR	1.70%	0.85	13.95%	12.25%	12.11%	12.57%
Pinnacle West Capital Corporation	PNW	1.70%	0.85	13.95%	12.25%	12.11%	12.57%
PNM Resources, Inc.	PNM	1.70%	0.90	13.95%	12.25%	12.72%	13.03%
Portland General Electric Company	POR	1.70%	0.85	13.95%	12.25%	12.11%	12.57%
PPL Corporation	PPL	1.70%	1.05	13.95%	12.25%	14.56%	14.41%
Southern Company	SO	1.70%	0.90	13.95%	12.25%	12.72%	13.03%
Xcel Energy Inc.	XEL	1.70%	0.75	13.95%	12.25%	10.88%	11.65%
Mean						12.42%	12.80%

Notes:

- [1] Source: Blue Chip Financial Forecasts, Vol. 39, No. 8, August 1, 2020, at 2
[2] Source: Value Line
[3] Source: Exhibit RMP ___ (AEB-3R), page 4
[4] Equals [3] - [1]
[5] Equals [1] + [2] x [4]
[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- LONG-TERM PROJECTED RISK-FREE RATE & VL BETA

CAPM: $K = R_f + \beta (R_m - R_f)$
ECAPM: $K = R_f + ((0.75 \times \beta (R_m - R_f)) + (0.25 \times (R_m - R_f)))$

Company	Ticker	[1]	[2]	[3]	[4]	[5]	[6]
		Projected 30-year U.S. Treasury bond yield (2022 - 2026)	Beta (β)	Market Return (Rm)	Market Risk Premium (Rm - Rf)	ROE (K)	ECAPM ROE
ALLETE, Inc.	ALE	3.00%	0.85	13.95%	10.95%	12.30%	12.71%
Alliant Energy Corporation	LNT	3.00%	0.80	13.95%	10.95%	11.76%	12.30%
Ameren Corporation	AEE	3.00%	0.80	13.95%	10.95%	11.76%	12.30%
American Electric Power Company, Inc.	AEP	3.00%	0.75	13.95%	10.95%	11.21%	11.89%
Avista Corporation	AVA	3.00%	0.95	13.95%	10.95%	13.40%	13.54%
CMS Energy Corporation	CMS	3.00%	0.80	13.95%	10.95%	11.76%	12.30%
Dominion Resources, Inc.	D	3.00%	0.80	13.95%	10.95%	11.76%	12.30%
DTE Energy Company	DTE	3.00%	0.90	13.95%	10.95%	12.85%	13.13%
Duke Energy Corporation	DUK	3.00%	0.85	13.95%	10.95%	12.30%	12.71%
Entergy Corporation	ETR	3.00%	0.95	13.95%	10.95%	13.40%	13.54%
Eergy, Inc.	EVRG	3.00%	1.05	13.95%	10.95%	14.49%	14.36%
IDACORP, Inc.	IDA	3.00%	0.80	13.95%	10.95%	11.76%	12.30%
NextEra Energy, Inc.	NEE	3.00%	0.85	13.95%	10.95%	12.30%	12.71%
NorthWestern Corporation	NWE	3.00%	0.90	13.95%	10.95%	12.85%	13.13%
OGE Energy Corporation	OGE	3.00%	1.05	13.95%	10.95%	14.49%	14.36%
Otter Tail Corporation	OTTR	3.00%	0.85	13.95%	10.95%	12.30%	12.71%
Pinnacle West Capital Corporation	PNW	3.00%	0.85	13.95%	10.95%	12.30%	12.71%
PNM Resources, Inc.	PNM	3.00%	0.90	13.95%	10.95%	12.85%	13.13%
Portland General Electric Company	POR	3.00%	0.85	13.95%	10.95%	12.30%	12.71%
PPL Corporation	PPL	3.00%	1.05	13.95%	10.95%	14.49%	14.36%
Southern Company	SO	3.00%	0.90	13.95%	10.95%	12.85%	13.13%
Xcel Energy Inc.	XEL	3.00%	0.75	13.95%	10.95%	11.21%	11.89%
Mean						12.58%	12.92%

Notes:

[1] Source: Blue Chip Financial Forecasts, Vol. 39, No. 6, June 1, 2020, at 14

[2] Source: Value Line

[3] Source: Exhibit RMP ___ (AEB-3R), page 4

[4] Equals [3] - [1]

[5] Equals [1] + [2] x [4]

[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- CURRENT RISK-FREE RATE & BLOOMBERG BETA

CAPM: $K = R_f + \beta (R_m - R_f)$
ECAPM: $K = R_f + ((0.75 \times \beta (R_m - R_f)) + (0.25 \times (R_m - R_f)))$

Company	Ticker	[1]	[2]	[3]	[4]	[5]	[6]
		Current 30-day average of 30-year U.S. Treasury bond yield	Beta (β)	Market Return (Rm)	Market Risk Premium (Rm - Rf)	ROE (K)	ECAPM ROE
ALLETE, Inc.	ALE	1.34%	0.83	13.95%	12.60%	11.83%	12.36%
Alliant Energy Corporation	LNT	1.34%	0.81	13.95%	12.60%	11.56%	12.15%
Ameren Corporation	AEE	1.34%	0.76	13.95%	12.60%	10.88%	11.65%
American Electric Power Company, Inc.	AEP	1.34%	0.77	13.95%	12.60%	11.02%	11.75%
Avista Corporation	AVA	1.34%	0.79	13.95%	12.60%	11.34%	11.99%
CMS Energy Corporation	CMS	1.34%	0.77	13.95%	12.60%	11.01%	11.74%
Dominion Resources, Inc.	D	1.34%	0.69	13.95%	12.60%	10.10%	11.06%
DTE Energy Company	DTE	1.34%	0.85	13.95%	12.60%	12.03%	12.51%
Duke Energy Corporation	DUK	1.34%	0.73	13.95%	12.60%	10.53%	11.38%
Entergy Corporation	ETR	1.34%	0.84	13.95%	12.60%	11.89%	12.40%
Eergy, Inc.	EVRG	1.34%	0.81	13.95%	12.60%	11.55%	12.15%
IDACORP, Inc.	IDA	1.34%	0.85	13.95%	12.60%	12.02%	12.51%
NextEra Energy, Inc.	NEE	1.34%	0.76	13.95%	12.60%	10.93%	11.69%
NorthWestern Corporation	NWE	1.34%	0.91	13.95%	12.60%	12.78%	13.07%
OGE Energy Corporation	OGE	1.34%	0.93	13.95%	12.60%	13.12%	13.33%
Otter Tail Corporation	OTTR	1.34%	0.87	13.95%	12.60%	12.32%	12.72%
Pinnacle West Capital Corporation	PNW	1.34%	0.84	13.95%	12.60%	11.88%	12.40%
PNM Resources, Inc.	PNM	1.34%	0.94	13.95%	12.60%	13.18%	13.38%
Portland General Electric Company	POR	1.34%	0.82	13.95%	12.60%	11.68%	12.24%
PPL Corporation	PPL	1.34%	0.92	13.95%	12.60%	12.95%	13.20%
Southern Company	SO	1.34%	0.74	13.95%	12.60%	10.62%	11.45%
Xcel Energy Inc.	XEL	1.34%	0.73	13.95%	12.60%	10.59%	11.43%
Mean						11.63%	12.21%

Notes:

[1] Source: Bloomberg Professional

[2] Source: Bloomberg Professional

[3] Source: Exhibit RMP ___ (AEB-3R), page 4

[4] Equals [3] - [1]

[5] Equals [1] + [2] x [4]

[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- NEAR-TERM PROJECTED RISK-FREE RATE & BLOOMBERG BETA

CAPM: $K = R_f + \beta (R_m - R_f)$
ECAPM: $K = R_f + ((0.75 \times \beta (R_m - R_f)) + (0.25 \times (R_m - R_f)))$

Company	Ticker	[1]	[2]	[3]	[4]	[5]	[6]
		Near-term projected 30-year U.S. Treasury bond yield (Q4 2020 - Q4 2021)	Beta (β)	Market Return (Rm)	Market Risk Premium (Rm - Rf)	ROE (K)	ECAPM ROE
ALLETE, Inc.	ALE	1.70%	0.83	13.95%	12.25%	11.89%	12.40%
Alliant Energy Corporation	LNT	1.70%	0.81	13.95%	12.25%	11.62%	12.20%
Ameren Corporation	AEE	1.70%	0.76	13.95%	12.25%	10.97%	11.72%
American Electric Power Company, Inc.	AEP	1.70%	0.77	13.95%	12.25%	11.10%	11.81%
Avista Corporation	AVA	1.70%	0.79	13.95%	12.25%	11.42%	12.05%
CMS Energy Corporation	CMS	1.70%	0.77	13.95%	12.25%	11.09%	11.80%
Dominion Resources, Inc.	D	1.70%	0.69	13.95%	12.25%	10.21%	11.14%
DTE Energy Company	DTE	1.70%	0.85	13.95%	12.25%	12.09%	12.55%
Duke Energy Corporation	DUK	1.70%	0.73	13.95%	12.25%	10.63%	11.46%
Entergy Corporation	ETR	1.70%	0.84	13.95%	12.25%	11.95%	12.45%
Eergy, Inc.	EVRG	1.70%	0.81	13.95%	12.25%	11.62%	12.20%
IDACORP, Inc.	IDA	1.70%	0.85	13.95%	12.25%	12.08%	12.55%
NextEra Energy, Inc.	NEE	1.70%	0.76	13.95%	12.25%	11.02%	11.75%
NorthWestern Corporation	NWE	1.70%	0.91	13.95%	12.25%	12.81%	13.10%
OGE Energy Corporation	OGE	1.70%	0.93	13.95%	12.25%	13.15%	13.35%
Otter Tail Corporation	OTTR	1.70%	0.87	13.95%	12.25%	12.36%	12.76%
Pinnacle West Capital Corporation	PNW	1.70%	0.84	13.95%	12.25%	11.94%	12.44%
PNM Resources, Inc.	PNM	1.70%	0.94	13.95%	12.25%	13.21%	13.39%
Portland General Electric Company	POR	1.70%	0.82	13.95%	12.25%	11.74%	12.29%
PPL Corporation	PPL	1.70%	0.92	13.95%	12.25%	12.97%	13.22%
Southern Company	SO	1.70%	0.74	13.95%	12.25%	10.72%	11.53%
Xcel Energy Inc.	XEL	1.70%	0.73	13.95%	12.25%	10.68%	11.50%
Mean						11.69%	12.26%

Notes:

- [1] Source: Blue Chip Financial Forecasts, Vol. 39, No. 8, August 1, 2020, at 2
[2] Source: Bloomberg Professional
[3] Source: Exhibit RMP ___ (AEB-3R), page 4
[4] Equals [3] - [1]
[5] Equals [1] + [2] x [4]
[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- LONG-TERM PROJECTED RISK-FREE RATE & BLOOMBERG BETA

CAPM: $K = R_f + \beta (R_m - R_f)$
ECAPM: $K = R_f + ((0.75 \times \beta (R_m - R_f)) + (0.25 \times (R_m - R_f)))$

Company	Ticker	[1]	[2]	[3]	[4]	[5]	[6]
		Projected 30-year U.S. Treasury bond yield (2022 - 2026)	Beta (β)	Market Return (Rm)	Market Risk Premium (Rm - Rf)	ROE (K)	ECAPM ROE
ALLETE, Inc.	ALE	3.00%	0.83	13.95%	10.95%	12.10%	12.56%
Alliant Energy Corporation	LNT	3.00%	0.81	13.95%	10.95%	11.87%	12.39%
Ameren Corporation	AEE	3.00%	0.76	13.95%	10.95%	11.29%	11.95%
American Electric Power Company, Inc.	AEP	3.00%	0.77	13.95%	10.95%	11.40%	12.04%
Avista Corporation	AVA	3.00%	0.79	13.95%	10.95%	11.69%	12.25%
CMS Energy Corporation	CMS	3.00%	0.77	13.95%	10.95%	11.39%	12.03%
Dominion Resources, Inc.	D	3.00%	0.69	13.95%	10.95%	10.61%	11.44%
DTE Energy Company	DTE	3.00%	0.85	13.95%	10.95%	12.28%	12.70%
Duke Energy Corporation	DUK	3.00%	0.73	13.95%	10.95%	10.98%	11.72%
Entergy Corporation	ETR	3.00%	0.84	13.95%	10.95%	12.16%	12.61%
Eergy, Inc.	EVRG	3.00%	0.81	13.95%	10.95%	11.87%	12.39%
IDACORP, Inc.	IDA	3.00%	0.85	13.95%	10.95%	12.28%	12.69%
NextEra Energy, Inc.	NEE	3.00%	0.76	13.95%	10.95%	11.33%	11.98%
NorthWestern Corporation	NWE	3.00%	0.91	13.95%	10.95%	12.93%	13.19%
OGE Energy Corporation	OGE	3.00%	0.93	13.95%	10.95%	13.23%	13.41%
Otter Tail Corporation	OTTR	3.00%	0.87	13.95%	10.95%	12.53%	12.88%
Pinnacle West Capital Corporation	PNW	3.00%	0.84	13.95%	10.95%	12.15%	12.60%
PNM Resources, Inc.	PNM	3.00%	0.94	13.95%	10.95%	13.28%	13.45%
Portland General Electric Company	POR	3.00%	0.82	13.95%	10.95%	11.97%	12.47%
PPL Corporation	PPL	3.00%	0.92	13.95%	10.95%	13.08%	13.29%
Southern Company	SO	3.00%	0.74	13.95%	10.95%	11.06%	11.78%
Xcel Energy Inc.	XEL	3.00%	0.73	13.95%	10.95%	11.03%	11.76%
Mean						11.93%	12.44%

Notes:

- [1] Source: Blue Chip Financial Forecasts, Vol. 39, No. 6, June 1, 2020, at 14
[2] Source: Bloomberg Professional
[3] Source: Exhibit RMP ___ (AEB-3R), page 4
[4] Equals [3] - [1]
[5] Equals [1] + [2] x [4]
[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

MARKET RISK PREMIUM DERIVED FROM S&P EARNINGS AND ESTIMATE REPORT

[7] S&P's estimate of the S&P 500 Dividend Yield	1.72%
[8] S&P's estimate of the S&P 500 Growth Rate	12.12%
[9] S&P 500 Estimated Required Market Return	13.95%

Notes:

[7] Source: S&P Dow Jones Indices, S&P 500 Earnings and Estimate Report, July 31, 2020

[8] Source: S&P Dow Jones Indices, S&P 500 Earnings and Estimate Report, July 31, 2020

[9] Equals $([7] \times (1 + (0.5 \times [8]))) + [8]$

Rocky Mountain Power
Exhibit RMP___(AEB-4R)
Docket No. 20-035-04
Witness: Ann E. Bulkley

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF UTAH

ROCKY MOUNTAIN POWER

Exhibit Accompanying Rebuttal Testimony of Ann E. Bulkley

Risk Premium Analysis

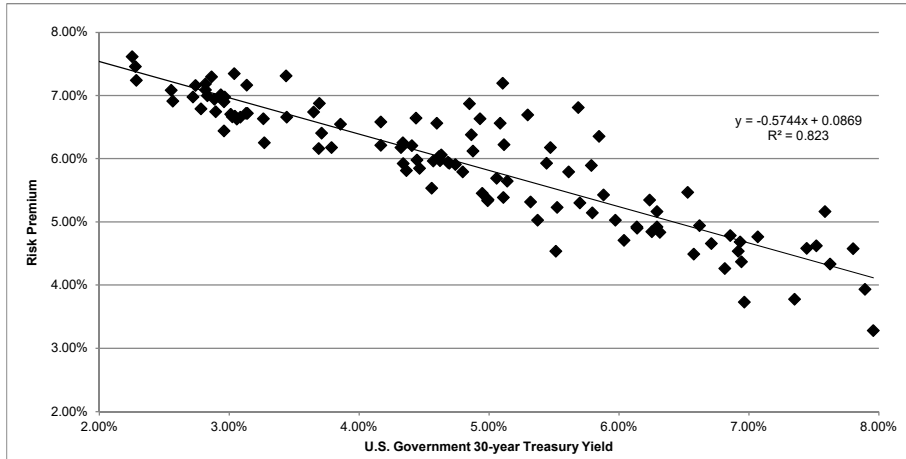
September 2020

BOND YIELD PLUS RISK PREMIUM

	[1]	[2]	[3]
	Average Authorized Electric ROE	U.S. Govt. 30-year Treasury	Risk Premium
1992.1	12.38%	7.80%	4.58%
1992.2	11.83%	7.89%	3.93%
1992.3	12.03%	7.45%	4.59%
1992.4	12.14%	7.52%	4.62%
1993.1	11.84%	7.07%	4.77%
1993.2	11.64%	6.86%	4.79%
1993.3	11.15%	6.31%	4.84%
1993.4	11.04%	6.14%	4.90%
1994.1	11.07%	6.57%	4.49%
1994.2	11.13%	7.35%	3.78%
1994.3	12.75%	7.58%	5.17%
1994.4	11.24%	7.96%	3.28%
1995.1	11.96%	7.63%	4.34%
1995.2	11.32%	6.94%	4.37%
1995.3	11.37%	6.71%	4.66%
1995.4	11.58%	6.23%	5.35%
1996.1	11.46%	6.29%	5.17%
1996.2	11.46%	6.92%	4.54%
1996.3	10.70%	6.96%	3.74%
1996.4	11.56%	6.62%	4.94%
1997.1	11.08%	6.81%	4.27%
1997.2	11.62%	6.93%	4.68%
1997.3	12.00%	6.53%	5.47%
1997.4	11.06%	6.14%	4.92%
1998.1	11.31%	5.88%	5.43%
1998.2	12.20%	5.85%	6.35%
1998.3	11.65%	5.47%	6.18%
1998.4	12.30%	5.10%	7.20%
1999.1	10.40%	5.37%	5.03%
1999.2	10.94%	5.79%	5.15%
1999.3	10.75%	6.04%	4.71%
1999.4	11.10%	6.25%	4.85%
2000.1	11.21%	6.29%	4.92%
2000.2	11.00%	5.97%	5.03%
2000.3	11.68%	5.79%	5.89%
2000.4	12.50%	5.69%	6.81%
2001.1	11.38%	5.44%	5.93%
2001.2	11.00%	5.70%	5.30%
2001.3	10.76%	5.52%	5.23%
2001.4	11.99%	5.30%	6.70%
2002.1	10.05%	5.51%	4.54%
2002.2	11.41%	5.61%	5.79%
2002.3	11.65%	5.08%	6.57%
2002.4	11.57%	4.93%	6.64%
2003.1	11.72%	4.85%	6.87%
2003.2	11.16%	4.60%	6.56%
2003.3	10.50%	5.11%	5.39%
2003.4	11.34%	5.11%	6.23%
2004.1	11.00%	4.88%	6.12%
2004.2	10.64%	5.32%	5.32%
2004.3	10.75%	5.06%	5.69%
2004.4	11.24%	4.86%	6.38%
2005.1	10.63%	4.69%	5.93%
2005.2	10.31%	4.47%	5.85%
2005.3	11.08%	4.44%	6.65%
2005.4	10.63%	4.68%	5.95%
2006.1	10.70%	4.63%	6.06%
2006.2	10.79%	5.14%	5.65%
2006.3	10.35%	4.99%	5.35%
2006.4	10.65%	4.74%	5.91%
2007.1	10.59%	4.80%	5.80%
2007.2	10.33%	4.99%	5.34%
2007.3	10.40%	4.95%	5.45%
2007.4	10.65%	4.61%	6.04%
2008.1	10.62%	4.41%	6.21%
2008.2	10.54%	4.57%	5.97%
2008.3	10.43%	4.44%	5.98%
2008.4	10.39%	3.65%	6.74%
2009.1	10.75%	3.44%	7.31%
2009.2	10.75%	4.17%	6.58%
2009.3	10.50%	4.32%	6.18%
2009.4	10.59%	4.34%	6.26%
2010.1	10.59%	4.62%	5.97%
2010.2	10.18%	4.36%	5.82%
2010.3	10.40%	3.86%	6.55%
2010.4	10.38%	4.17%	6.21%
2011.1	10.09%	4.56%	5.53%
2011.2	10.26%	4.34%	5.92%
2011.3	10.57%	3.69%	6.88%

BOND YIELD PLUS RISK PREMIUM

	[1]	[2]	[3]
	Average Authorized Electric ROE	U.S. Govt. 30-year Treasury	Risk Premium
2011.4	10.39%	3.04%	7.35%
2012.1	10.30%	3.14%	7.17%
2012.2	9.95%	2.93%	7.02%
2012.3	9.90%	2.74%	7.16%
2012.4	10.16%	2.86%	7.30%
2013.1	9.85%	3.13%	6.72%
2013.2	9.86%	3.14%	6.72%
2013.3	10.12%	3.71%	6.41%
2013.4	9.97%	3.79%	6.18%
2014.1	9.86%	3.69%	6.17%
2014.2	10.10%	3.44%	6.66%
2014.3	9.90%	3.26%	6.64%
2014.4	9.94%	2.96%	6.98%
2015.1	9.64%	2.55%	7.08%
2015.2	9.83%	2.88%	6.94%
2015.3	9.40%	2.96%	6.44%
2015.4	9.86%	2.96%	6.90%
2016.1	9.70%	2.72%	6.98%
2016.2	9.48%	2.57%	6.91%
2016.3	9.74%	2.28%	7.46%
2016.4	9.83%	2.83%	7.00%
2017.1	9.72%	3.04%	6.67%
2017.2	9.64%	2.90%	6.75%
2017.3	10.00%	2.82%	7.18%
2017.4	9.91%	2.82%	7.09%
2018.1	9.69%	3.02%	6.66%
2018.2	9.75%	3.09%	6.66%
2018.3	9.69%	3.06%	6.63%
2018.4	9.52%	3.27%	6.25%
2019.1	9.72%	3.01%	6.71%
2019.2	9.58%	2.78%	6.79%
2019.3	9.53%	2.29%	7.24%
2019.4	9.87%	2.25%	7.62%
2020.1	9.72%	1.89%	7.83%
2020.2	9.58%	1.38%	8.20%
2020.3	9.40%	1.31%	8.09%
AVERAGE	10.69%	4.71%	5.98%
MEDIAN	10.63%	4.69%	6.12%



SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.90721
R Square	0.82304
Adjusted R Square	0.82147
Standard Error	0.00428
Observations	115

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	0.009622	0.009622	525.552738	0.000000
Residual	113	0.002069	0.000018		
Total	114	0.011691			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	0.0869	0.00125	69.68	0.000000	0.084402	0.089342	0.084402	0.089342
U.S. Govt. 30-year Treasury	(0.5744)	0.02505	(22.92)	0.000000	(0.623998)	(0.524725)	(0.623998)	(0.524725)

	[7]	[8]	[9]
	U.S. Govt. 30-year Treasury	Risk Premium	ROE
Current 30-day average of 30-year U.S. Treasury bond yield [4]	1.34%	7.92%	9.26%
Blue Chip Near-Term Projected Forecast (Q4 2020 - Q4 2021) [5]	1.70%	7.71%	9.41%
Blue Chip Long-Term Projected Forecast (2022-2026) [6]	3.00%	6.96%	9.96%
AVERAGE			9.54%

Notes:

- [1] Source: Regulatory Research Associates, rate cases through July 31, 2020
- [2] Source: Bloomberg Professional, quarterly bond yields are the average of each trading day in the quarter
- [3] Equals Column [1] - Column [2]
- [4] Source: Bloomberg Professional
- [5] Source: Blue Chip Financial Forecasts, Vol. 39, No. 8, August 1, 2020, at 2
- [6] Source: Blue Chip Financial Forecasts, Vol. 39, No. 6, June 1, 2020, at 14
- [7] See notes [4], [5] & [6]
- [8] Equals $0.086872 + (-0.574362 \times \text{Column [7]})$
- [9] Equals Column [7] + Column [8]

Rocky Mountain Power
Exhibit RMP___(AEB-5R)
Docket No. 20-035-04
Witness: Ann E. Bulkley

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF UTAH

ROCKY MOUNTAIN POWER

Exhibit Accompanying Rebuttal Testimony of Ann E. Bulkley

Expected Earnings Analysis

September 2020

EXPECTED EARNINGS ANALYSIS

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]
	Value Line ROE 2023-2025	Value Line Total Capital 2019	Value Line Common Equity Ratio 2019	Total Equity 2019	Value Line Total Capital 2023-2025	Value Line Common Equity Ratio 2023-2025	Total Equity 2023-2025	Compound Annual Growth Rate	Adjustment Factor	Adjusted Return on Common Equity
ALE	8.00%	3,633	61.40%	2,231	4,750	59.00%	2,803	4.67%	1.023	8.18%
Alliant Energy Corporation	10.50%	10,226	48.50%	4,960	12,000	48.00%	5,760	3.04%	1.015	10.66%
Ameren Corporation	10.00%	17,116	47.10%	8,062	23,900	50.00%	11,950	8.19%	1.039	10.39%
American Electric Power Company, Inc.	10.50%	44,759	43.90%	19,649	56,700	47.00%	26,649	6.28%	1.030	10.82%
Avista Corporation	7.50%	3,835	50.60%	1,940	4,750	49.00%	2,328	3.71%	1.018	7.64%
CMS Energy Corporation	13.50%	17,082	29.40%	5,022	24,200	31.50%	7,623	8.70%	1.042	14.06%
Dominion Resources, Inc.	14.00%	65,818	45.00%	29,618	75,900	46.00%	34,914	3.34%	1.016	14.23%
DTE Energy Company	10.50%	27,607	42.30%	11,678	38,400	41.50%	15,936	6.42%	1.031	10.83%
Duke Energy Corporation	8.50%	101,807	44.10%	44,897	123,600	45.00%	55,620	4.38%	1.021	8.68%
Energy Corporation	11.00%	27,557	37.10%	10,224	32,900	41.00%	13,325	5.44%	1.026	11.29%
Energys, Inc.	8.00%	17,337	49.40%	8,564	20,300	46.50%	9,440	1.96%	1.010	8.08%
IDACORP, Inc.	9.50%	4,201	58.70%	2,466	5,450	53.50%	2,916	3.41%	1.017	9.66%
NextEra Energy, Inc.	12.50%	74,548	49.60%	36,976	98,400	50.50%	49,692	6.09%	1.030	12.87%
NorthWestern Corporation	8.50%	4,290	47.50%	2,038	4,825	50.00%	2,413	3.43%	1.017	8.64%
OGE Energy Corporation	12.50%	7,335	56.40%	4,137	8,150	51.50%	4,197	0.29%	1.001	12.52%
Otter Tail Corporation	11.00%	1,471	53.10%	781	1,850	53.00%	981	4.65%	1.023	11.25%
PNM	10.00%	10,263	52.90%	5,429	14,525	46.50%	6,754	4.46%	1.022	10.22%
PNM Resources, Inc.	9.50%	4,208	39.90%	1,679	5,475	49.00%	2,683	9.83%	1.047	9.94%
Portland General Electric Company	9.00%	5,323	48.70%	2,592	6,400	47.50%	3,040	3.24%	1.016	9.14%
PPL Corporation	12.50%	33,712	38.50%	12,979	39,200	42.50%	16,660	5.12%	1.025	12.81%
Southern Company	12.50%	69,594	39.50%	27,490	84,300	39.50%	33,299	3.91%	1.019	12.74%
Xcel Energy Inc.	10.50%	30,646	43.20%	13,239	41,700	42.50%	17,723	6.01%	1.029	10.81%
Mean										10.70%
Median										10.73%

Notes:

- [1] Source: Value Line
- [2] Source: Value Line
- [3] Source: Value Line
- [4] Equals [2] x [3]
- [5] Source: Value Line
- [6] Source: Value Line
- [7] Equals [5] x [6]
- [8] Equals ([7] / [4]) ^ (1/5) - 1
- [9] Equals 2 x (1 + [8]) / (2 + [8])
- [10] Equals [1] x [9]

Rocky Mountain Power
Exhibit RMP__(AEB-6R)
Docket No. 20-035-04
Witness: Ann E. Bulkley

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF UTAH

ROCKY MOUNTAIN POWER

Exhibit Accompanying Rebuttal Testimony of Ann E. Bulkley

Mr. Coleman's Constant Growth DCF

September 2020

MR. COLEMAN'S CONSTANT GROWTH DCF - FILED

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
Company	Annualized Dividend	Stock Price	Dividend Yield	Expected Dividend Yield	Value Line Earnings Growth	Yahoo! Finance Earnings Growth	Zacks Earnings Growth	Average Earnings Growth Rate	Value Line Dividend Growth	75-25 Wtd. Growth	Estimated Cost of Equity Wtd. Growth
ALLETE, Inc.	\$2.46	\$58.26	4.22%	4.43%	5.00%	7.00%	NA	6.00%	5.00%	5.75%	10.18%
Alliant Energy Corporation	\$1.42	\$50.82	2.79%	2.95%	6.50%	5.30%	5.54%	5.78%	5.50%	5.71%	8.66%
Ameren Corporation	\$2.01	\$76.94	2.61%	2.73%	6.50%	5.85%	6.75%	6.37%	4.50%	5.90%	8.63%
American Electric Power Company, Inc.	\$2.84	\$85.05	3.34%	3.52%	4.00%	5.82%	5.69%	5.17%	5.50%	5.25%	8.78%
Avista Corporation	\$1.60	\$36.74	4.35%	4.53%	3.50%	6.00%	5.22%	4.91%	4.00%	4.68%	9.21%
CenterPoint Energy, Inc.	\$1.19	\$19.40	6.13%	6.29%	10.50%	-6.54%	5.00%	2.99%	2.50%	2.87%	9.15%
CMS Energy Corporation	\$1.63	\$61.49	2.65%	2.84%	7.00%	7.08%	6.99%	7.02%	7.00%	7.02%	9.85%
Dominion Resources, Inc.	\$3.76	\$78.06	4.82%	5.06%	6.50%	2.74%	3.03%	4.09%	5.00%	4.32%	9.37%
DTE Energy Company	\$4.05	\$111.08	3.65%	3.90%	4.50%	6.03%	5.67%	5.40%	7.00%	5.80%	9.70%
Duke Energy Corporation	\$3.82	\$82.20	4.65%	4.76%	6.00%	3.81%	4.34%	4.72%	2.50%	4.16%	8.93%
Entergy Corporation	\$3.74	\$99.65	3.75%	3.88%	2.00%	5.95%	5.77%	4.57%	3.50%	4.31%	8.19%
Energy, Inc.	\$2.05	\$62.70	3.27%	3.27%	0.00%	4.10%	5.04%	3.05%	0.00%	2.29%	5.55%
FirEnergy Corporation	\$1.60	\$36.03	4.44%	4.60%	6.50%	-2.40%	NA	2.05%	3.50%	2.41%	7.01%
IDACORP, Inc.	\$2.68	\$91.05	2.94%	3.15%	3.50%	2.60%	2.63%	2.91%	7.00%	3.93%	7.08%
NexEra Energy, Inc.	\$5.49	\$266.69	2.06%	2.26%	10.50%	8.17%	7.97%	8.88%	10.00%	9.16%	11.42%
NorthWestern Corporation	\$2.38	\$54.51	4.37%	4.56%	3.00%	3.71%	3.39%	3.37%	4.50%	3.65%	8.21%
OGE Energy Corporation	\$1.58	\$31.85	4.96%	5.28%	6.50%	2.40%	3.69%	4.20%	6.50%	4.77%	10.06%
Otter Tail Corporation	\$1.46	\$38.66	3.78%	3.93%	5.00%	9.00%	NA	7.00%	4.00%	6.25%	10.18%
Pinnacle West Capital Corporation	\$3.13	\$79.76	3.92%	4.16%	5.00%	4.36%	4.70%	4.69%	6.00%	5.02%	9.17%
PNM Resources, Inc.	\$1.23	\$40.16	3.06%	3.28%	7.00%	5.60%	4.87%	5.82%	7.00%	6.12%	9.39%
Portland General Electric Company	\$1.59	\$42.84	3.71%	3.95%	4.50%	4.45%	5.27%	4.74%	6.50%	5.18%	9.13%
PPL Corporation	\$1.66	\$25.75	6.45%	6.58%	1.50%	2.90%	NA	2.20%	2.00%	2.15%	8.73%
Southern Company	\$2.54	\$53.98	4.71%	4.85%	3.50%	4.55%	4.00%	4.02%	3.00%	3.76%	8.61%
Xcel Energy Inc.	\$1.70	\$65.91	2.58%	2.73%	5.50%	6.10%	5.93%	5.84%	6.00%	5.88%	8.62%
MEAN			3.88%	4.06%	5.17%	4.36%	5.07%	4.82%	4.92%	4.85%	8.91%

Notes

- [1] Source: DPU Exhibit 2.03 DIR
- [2] Source: DPU Exhibit 2.03 DIR
- [3] Equals [1] / [2]
- [4] Equals [3] x (1 + [9])
- [5] Source: DPU Exhibit 2.03 DIR
- [6] Source: DPU Exhibit 2.03 DIR
- [7] Source: DPU Exhibit 2.03 DIR
- [8] Equals Average ([5], [6], [7])
- [9] Source: DPU Exhibit 2.03 DIR
- [10] Equals (0.75 x [8]) + (0.25 x [9])
- [11] Equals [4] + [10]

MR. COLEMAN'S CONSTANT GROWTH DCF - EXCL. FE & CNP, UPDATED VALUE LINE DATA, & ADJ. EXPECTED DIVIDEND

Company	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
	Annualized Dividend	Stock Price	Dividend Yield	Expected Dividend Yield	Value Line Earnings Growth	Yahoo! Finance Earnings Growth	Zacks Earnings Growth	Average Earnings Growth Rate	Value Line Dividend Growth	75-25 Wtd. Growth	Estimated Cost of Equity Wtd. Growth
ALLETE, Inc.	\$2.47	\$58.26	4.24%	4.49%	5.50%	7.00%	NA	6.25%	4.50%	5.81%	10.30%
Alliant Energy Corporation	\$1.52	\$50.82	2.99%	3.16%	6.50%	5.30%	5.54%	5.78%	5.00%	5.71%	8.87%
Ameren Corporation	\$2.01	\$76.94	2.61%	2.77%	6.00%	5.85%	6.75%	6.20%	5.00%	5.90%	8.67%
American Electric Power Company, Inc.	\$2.84	\$85.05	3.34%	3.52%	5.00%	5.82%	5.69%	5.50%	5.50%	5.50%	9.03%
Avista Corporation	\$1.62	\$36.74	4.41%	4.59%	1.00%	6.00%	5.22%	4.07%	4.00%	4.06%	8.64%
CMS Energy Corporation	\$1.63	\$61.49	2.65%	2.84%	7.50%	7.08%	6.99%	7.19%	7.00%	7.14%	9.98%
Dominion Resources, Inc.	\$3.76	\$78.06	4.82%	5.02%	7.00%	2.74%	3.03%	4.26%	4.50%	4.32%	9.34%
DTE Energy Company	\$4.12	\$111.08	3.71%	3.92%	5.00%	6.03%	5.67%	5.57%	6.50%	5.80%	9.72%
Duke Energy Corporation	\$3.82	\$82.20	4.65%	4.82%	5.00%	3.81%	4.34%	4.38%	2.00%	3.79%	8.61%
Entergy Corporation	\$3.74	\$99.65	3.75%	3.93%	3.00%	5.95%	5.77%	4.91%	4.00%	4.68%	8.61%
Evergy, Inc.	\$2.05	\$62.70	3.27%	3.41%	3.00%	4.10%	5.04%	4.05%	5.50%	4.41%	7.82%
IDACORP, Inc.	\$2.73	\$91.05	3.00%	3.11%	3.50%	2.60%	2.63%	2.91%	6.50%	3.81%	6.92%
NexEra Energy, Inc.	\$5.60	\$266.69	2.10%	2.29%	10.00%	8.17%	7.97%	8.71%	10.50%	9.16%	11.45%
NorthWestern Corporation	\$2.40	\$54.51	4.40%	4.54%	1.50%	3.71%	3.39%	2.87%	4.00%	3.15%	7.69%
OGE Energy Corporation	\$1.60	\$31.85	5.02%	5.21%	3.00%	2.40%	3.69%	3.03%	6.00%	3.77%	8.99%
OTTR	\$1.48	\$38.66	3.83%	4.06%	3.50%	9.00%	NA	6.25%	5.00%	5.94%	9.99%
Pinnacle West Capital Corporation	\$3.22	\$79.76	4.04%	4.22%	4.00%	4.36%	4.70%	4.35%	5.50%	4.64%	8.86%
PNM Resources, Inc.	\$1.24	\$40.16	3.09%	3.26%	6.00%	5.60%	4.87%	5.49%	5.50%	5.49%	8.75%
Portland General Electric Company	\$1.54	\$42.84	3.59%	3.77%	4.00%	4.45%	5.27%	4.57%	5.50%	4.81%	8.57%
PPL Corporation	\$1.66	\$25.75	6.45%	6.61%	2.50%	2.90%	NA	2.70%	2.00%	2.53%	9.14%
Southern Company	\$2.54	\$53.98	4.71%	4.88%	3.00%	4.55%	4.00%	3.85%	3.00%	3.64%	8.51%
Xcel Energy Inc.	\$1.72	\$65.91	2.61%	2.77%	6.00%	6.10%	5.93%	6.01%	6.00%	6.01%	8.77%
MEAN			3.79%	3.96%	4.61%	5.16%	5.08%	4.95%	5.16%	5.00%	8.97%

Notes

- [1] Source: Value Line dated May 15, 2020, June 12, 2020, and July 24, 2020
- [2] Source: DPU Exhibit 2.03 DIR
- [3] Equals [1] / [2]
- [4] Equals [3] x (1 + [10])
- [5] Source: Value Line dated May 15, 2020, June 12, 2020, and July 24, 2020
- [6] Source: DPU Exhibit 2.03 DIR
- [7] Source: DPU Exhibit 2.03 DIR
- [8] Equals Average ([5], [6], [7])
- [9] Source: Value Line dated May 15, 2020, June 12, 2020, and July 24, 2020
- [10] Equals (0.75 x [8]) + (0.25 x [9])
- [11] Equals [4] + [10]

MR. COLEMAN'S CONSTANT GROWTH DCF - EXCL. FE & CNP, UPDATED VALUE LINE DATA, ADJ. EXPECTED DIVIDEND, EARNINGS GROWTH RATES ONLY, & EXCL. INDIV. RESULTS < 7%
 With Exclusions

Company	Annualized Dividend	Stock Price	Dividend Yield	Expected Dividend Yield	Value Line Earnings Growth	Yahoo! Finance Earnings Growth	Zacks Earnings Growth	All Proxy Group			With Exclusions			
								[1]	[2]	[3]	[4]	[5]	[6]	[7]
								Average Earnings Growth Rate	Low ROE	Mean ROE	High ROE	Low ROE	Mean ROE	High ROE
ALLETE, Inc.	\$2.47	\$58.26	4.24%	4.50%	5.50%	7.00%	NA	6.25%	9.97%	10.75%	11.54%	9.97%	10.75%	11.54%
Alliant Energy Corporation	\$1.52	\$50.82	2.99%	3.16%	6.50%	5.30%	5.54%	5.78%	8.45%	8.94%	9.69%	8.45%	8.94%	9.69%
Ameren Corporation	\$2.01	\$76.94	2.61%	2.77%	6.00%	5.85%	6.75%	6.20%	8.62%	8.97%	9.54%	8.62%	8.97%	9.54%
American Electric Power Company, Inc.	\$2.84	\$85.05	3.34%	3.52%	5.00%	5.82%	5.69%	5.50%	8.51%	9.03%	9.35%	8.51%	9.03%	9.35%
Avista Corporation	\$1.62	\$36.74	4.41%	4.59%	1.00%	6.00%	5.22%	4.07%	5.45%	8.66%	10.67%	8.66%	8.66%	10.67%
CMS Energy Corporation	\$1.63	\$61.49	2.65%	2.84%	7.50%	7.08%	6.99%	7.19%	9.83%	10.03%	10.35%	9.83%	10.03%	10.35%
Dominion Resources, Inc.	\$3.76	\$78.06	4.82%	5.02%	7.00%	2.74%	3.03%	4.26%	7.69%	9.28%	12.15%	7.69%	9.28%	12.15%
DTE Energy Company	\$4.12	\$111.08	3.71%	3.92%	5.00%	6.03%	5.67%	5.57%	8.89%	9.48%	9.88%	8.89%	9.48%	9.88%
Duke Energy Corporation	\$3.82	\$82.20	4.65%	4.85%	5.00%	3.81%	4.34%	4.38%	8.63%	9.23%	9.88%	8.63%	9.23%	9.88%
Duke Energy Corporation	\$3.74	\$99.65	3.75%	3.94%	3.00%	5.95%	5.77%	4.91%	6.87%	8.84%	9.93%	6.87%	8.84%	9.93%
Energy Corporation	\$2.05	\$62.70	3.27%	3.40%	3.00%	4.10%	5.04%	4.05%	6.37%	7.45%	8.47%	6.37%	7.45%	8.47%
Evergy, Inc.	\$2.73	\$91.05	3.00%	3.09%	3.50%	2.60%	2.63%	2.91%	5.68%	6.00%	6.60%	5.68%	6.00%	6.60%
IDACORP, Inc.	\$5.60	\$266.69	2.10%	2.28%	10.00%	8.17%	7.97%	8.71%	10.24%	11.00%	12.31%	10.24%	11.00%	12.31%
NexEra Energy, Inc.	\$2.40	\$54.51	4.40%	4.53%	1.50%	3.71%	3.39%	2.87%	5.97%	7.40%	8.28%	7.40%	8.28%	8.90%
NorthWestern Corporation	\$1.60	\$31.85	5.02%	5.18%	3.00%	2.40%	3.69%	3.03%	7.54%	8.21%	8.90%	7.54%	8.21%	8.90%
OG Energy Corporation	\$1.48	\$38.66	3.83%	4.07%	3.50%	9.00%	NA	6.25%	7.46%	10.32%	13.17%	7.46%	10.32%	13.17%
Otter Tail Corporation	\$3.22	\$79.76	4.04%	4.21%	4.00%	4.36%	4.70%	4.35%	8.20%	8.57%	8.93%	8.20%	8.57%	8.93%
Pinnacle West Capital Corporation	\$1.24	\$40.16	3.09%	3.26%	6.00%	5.60%	4.87%	5.49%	8.11%	8.75%	9.27%	8.11%	8.75%	9.27%
PNM Resources, Inc.	\$1.54	\$42.84	3.59%	3.76%	4.00%	4.45%	5.27%	4.57%	7.74%	8.33%	9.05%	7.74%	8.33%	9.05%
Portland General Electric Company	\$1.66	\$25.75	6.45%	6.62%	2.50%	2.90%	NA	2.70%	9.11%	9.32%	9.53%	9.11%	9.32%	9.53%
PPL Corporation	\$2.54	\$53.98	4.71%	4.89%	3.00%	4.55%	4.00%	3.85%	7.85%	8.74%	9.47%	7.85%	8.74%	9.47%
Southern Company	\$1.72	\$65.91	2.61%	2.77%	6.00%	6.10%	5.93%	6.01%	8.69%	8.78%	8.87%	8.69%	8.78%	8.87%
Xcel Energy Inc.														
MEAN			3.79%	3.96%	4.61%	5.16%	5.08%	4.95%	7.99%	8.91%	9.81%	8.56%	9.05%	9.97%

Notes

- [1] Source: Value Line dated May 15, 2020, June 12, 2020, and July 24, 2020
- [2] Source: DPU Exhibit 2.03 DIR
- [3] Equals [1] / [2]
- [4] Equals [3] x (1 + [8])
- [5] Source: Value Line dated May 15, 2020, June 12, 2020, and July 24, 2020
- [6] Source: DPU Exhibit 2.03 DIR
- [7] Source: DPU Exhibit 2.03 DIR
- [8] Equals Average ([5], [6], [7])
- [9] Equals [3] x (1 + Minimum ([5], [6], [7]) + Minimum ([5], [6], [7])
- [10] Equals [4] + [8]
- [11] Equals [3] x (1 + Maximum ([5], [6], [7]) + Maximum ([5], [6], [7])
- [12] Equals [9] if greater than 7.00%
- [13] Equals [10] if greater than 7.00%
- [14] Equals [11] if greater than 7.00%

Rocky Mountain Power
Exhibit RMP__(AEB-7R)
Docket No. 20-035-04
Witness: Ann E. Bulkley

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF UTAH

ROCKY MOUNTAIN POWER

Exhibit Accompanying Rebuttal Testimony of Ann E. Bulkley

DPU Value Line Beta Coefficient Comparison

September 2020

VALUE LINE BETA COEFFICIENT COMPARISON

Proxy Group	Ticker	[1]	[2]
		Value Line as of Janaury 31, 2020	Value Line as of July 31, 2020
ALLETE, Inc.	ALE	0.65	0.85
Alliant Energy Corporation	LNT	0.60	0.80
Ameren Corporation	AEE	0.55	0.80
American Electric Power Company, Inc	AEP	0.55	0.75
Avista Corporation	AVA	0.60	0.95
CMS Energy Corporation	CMS	0.50	0.80
Dominion Resources, Inc.	D	0.55	0.80
DTE Energy Company	DTE	0.55	0.90
Duke Energy Corporation	DUK	0.50	0.85
Energy Corporation	ETR	0.60	0.95
Evergy, Inc.	EVRG	0.00	1.05
IDACORP, Inc.	IDA	0.55	0.80
NextEra Energy, Inc.	NEE	0.55	0.85
NorthWestern Corporation	NWE	0.60	0.90
OGE Energy Corporation	OGE	0.75	1.05
Otter Tail Corporation	OTTR	0.70	0.85
Pinnacle West Capital Corporation	PNW	0.50	0.85
PNM Resources, Inc.	PNM	0.60	0.90
Portland General Electric Company	POR	0.55	0.85
PPL Corporation	PPL	0.70	1.05
Southern Company	SO	0.50	0.90
Xcel Energy Inc.	XEL	0.50	0.75
Mean		0.55	0.88

Notes:

[1] Source: Value Line; dated November 15, 2020, December 13, 2020, and January 24, 2020.

[2] Source: Value Line; dated May 15, 2020, June 12, 2020 and July 24, 2020

Rocky Mountain Power
Exhibit RMP__(AEB-8R)
Docket No. 20-035-04
Witness: Ann E. Bulkley

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF UTAH

ROCKY MOUNTAIN POWER

Exhibit Accompanying Rebuttal Testimony of Ann E. Bulkley

Mr. Coleman's Adjusted Beta Coefficient

September 2020

MR. COLEMAN ADJUSTED BETA COEFFICIENT

Proxy Group	Ticker	[1]	[2]	[3]	[4]	[5]	[6]	Average Adj. Beta
		Value Line as of July 31, 2020	Yahoo! Finance	Zacks	Ned Davis Research	Average	Adj Beta	
ALLETE, Inc.	ALE	0.85	0.32	0.34	0.35	0.34	0.56	0.70
Alliant Energy Corporation	LNT	0.80	0.36	0.42	0.38	0.39	0.59	0.69
Ameren Corporation	AEE	0.80	0.27	0.30	0.29	0.29	0.52	0.66
American Electric Power Company, Inc.	AEP	0.75	0.37	0.38	0.39	0.38	0.58	0.67
Avista Corporation	AVA	0.95	0.42	0.41	0.48	0.44	0.62	0.79
CMS Energy Corporation	CMS	0.80	NA	0.21	0.21	0.21	0.47	0.64
Dominion Resources, Inc.	D	0.80	0.43	0.40	0.45	0.43	0.62	0.71
DTE Energy Company	DTE	0.90	0.61	0.60	0.62	0.61	0.74	0.82
Duke Energy Corporation	DUK	0.85	0.32	0.32	0.35	0.33	0.55	0.70
Entergy Corporation	ETR	0.95	0.56	0.59	0.58	0.58	0.72	0.83
Evergy, Inc.	EVRG	1.05	0.48	0.49	0.51	0.49	0.66	0.86
IDACORP, Inc.	IDA	0.80	0.43	0.43	0.45	0.44	0.62	0.71
NextEra Energy, Inc.	NEE	0.85	0.22	0.26	0.24	0.24	0.49	0.67
NorthWestern Corporation	NWE	0.90	0.35	0.33	0.37	0.35	0.56	0.73
OGE Energy Corporation	OGE	1.05	0.71	0.76	0.73	0.73	0.82	0.94
Otter Tail Corporation	OTTR	0.85	0.33	0.31	NA	0.32	0.54	0.70
Pinnacle West Capital Corporation	PNW	0.85	0.32	0.38	0.35	0.35	0.56	0.71
PNM Resources, Inc.	PNM	0.90	0.55	0.58	NA	0.57	0.71	0.80
Portland General Electric Company	POR	0.85	0.32	0.31	0.34	0.32	0.55	0.70
PPL Corporation	PPL	1.05	0.76	0.73	0.79	0.76	0.84	0.94
Southern Company	SO	0.90	0.43	0.42	0.45	0.43	0.62	0.76
Xcel Energy Inc.	XEL	0.75	0.27	0.29	0.29	0.28	0.52	0.63
Mean		0.88	0.42	0.42	0.43	0.42	0.61	0.74

Notes:

- [1] Source: Value Line; dated May 15, 2020, June 12, 2020 and July 24, 2020
- [2] Source: DPU Exhibit 2.04 DIR
- [3] Source: DPU Exhibit 2.04 DIR
- [4] Source: DPU Exhibit 2.04 DIR
- [5] Equals Average ([2], [3], [4])
- [6] Equals $0.67 \times [5] + 0.33 \times 1.00$
- [7] Equals Average ([1], [6])

Rocky Mountain Power
Exhibit RMP__(AEB-9R)
Docket No. 20-035-04
Witness: Ann E. Bulkley

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF UTAH

ROCKY MOUNTAIN POWER

Exhibit Accompanying Rebuttal Testimony of Ann E. Bulkley
Adjustments to Dr. Woolridge's Internal Growth Rate Measures

September 2020

ADJUSTMENTS TO WOOLRIDGE INTERNAL GROWTH RATE MEASURES
 ELECTRIC PROXY GROUP

Company	Ticker	Value Line Sustainable Growth				Internal Growth	Shares Out	Value Change	S x V	BR + SV
		Return on Equity	Retention Rate	Retention Rate	Growth					
ALLETE, Inc. (NYSE-ALE)	ALE	8.00%	31.00%	2.48%	1.45%	33.23%	0.48%	2.96%		
Alliant Energy Corporation (NYSE-LNT)	LNT	10.50%	33.00%	3.47%	2.66%	40.53%	1.08%	4.54%		
Ameren Corporation (NYSE-AEE)	AEE	10.00%	45.00%	4.50%	3.60%	37.86%	1.36%	5.86%		
American Electric Power Co. (NYSE-AEP)	AEP	10.50%	31.00%	3.26%	2.68%	47.37%	1.27%	4.52%		
Avangrid (NYSE-AGR)	AGR	5.50%	28.00%	1.54%	0.00%	-10.53%	0.00%	1.54%		
Avista Corporation (NYSE-AVA)	AVA	7.50%	22.00%	1.65%	2.77%	39.52%	1.10%	2.75%		
CMS Energy Corporation (NYSE-CMS)	CMS	13.50%	38.00%	5.13%	2.62%	57.50%	1.50%	6.63%		
Consolidated Edison, Inc. (NYSE-ED)	ED	8.00%	34.00%	2.72%	2.73%	32.16%	0.88%	3.60%		
Edison International (NYSE-EIX)	EIX	11.00%	40.00%	4.40%	1.50%	41.88%	0.63%	5.03%		
Energy Corporation (NYSE-ETR)	ETR	11.00%	34.00%	3.74%	2.41%	47.71%	1.15%	4.89%		
Energy, Inc. (NYSE-EVRG)	EVRG	8.00%	25.00%	2.00%	0.05%	36.15%	0.02%	2.02%		
Eversource Energy (NYSE-ES)	ES	9.50%	40.00%	3.80%	2.50%	40.91%	1.02%	4.82%		
Exelon Corporation (NYSE-EXG)	EXG	9.00%	48.00%	4.32%	0.45%	23.33%	0.11%	4.43%		
FirstEnergy Corporation (NYSE-FE)	FE	15.50%	40.00%	6.20%	3.21%	61.43%	1.97%	8.17%		
Hawaiian Electric Industries (NYSE-HE)	HE	8.50%	32.00%	2.72%	1.30%	30.00%	0.39%	3.11%		
IDACORP, Inc. (NYSE-IDA)	IDA	9.50%	36.00%	3.42%	-0.01%	42.00%	-0.01%	3.41%		
MGE Energy, Inc. (NYSE-MGEE)	MGEE	9.50%	41.00%	3.90%	1.91%	55.86%	1.07%	4.96%		
NextEra Energy, Inc. (NYSE-NEE)	NEE	12.50%	36.00%	4.50%	0.67%	63.76%	0.43%	4.93%		
NorthWestern Corporation (NYSE-NWE)	NWE	8.50%	27.00%	2.30%	1.62%	39.00%	0.63%	2.93%		
OGE Energy Corp. (NYSE-OGI)	OGE	12.50%	26.00%	3.25%	-0.02%	55.79%	-0.01%	3.24%		
Offer Tail Corporation (NDQ-OTTR)	OTTR	11.00%	31.00%	3.41%	1.49%	55.71%	0.83%	4.24%		
Pinnacle West Capital Corp. (NYSE-PNW)	PNW	10.00%	30.00%	3.00%	1.78%	45.48%	0.81%	3.81%		
PNM Resources, Inc. (NYSE-PNM)	PNM	9.50%	46.00%	4.37%	4.50%	35.00%	1.57%	5.94%		
Portland General Electric Company (NYSE-POR)	POR	9.00%	36.00%	3.24%	0.21%	35.71%	0.08%	3.32%		
PPL Corporation (NYSE-PPL)	PPL	12.50%	33.00%	4.13%	0.62%	46.88%	0.29%	4.42%		
Sempra Energy (NYSE-SRE)	SRE	10.50%	42.00%	4.41%	5.78%	46.21%	2.67%	7.08%		
Southern Company (NYSE-SO)	SO	12.50%	25.00%	3.13%	1.34%	48.75%	0.65%	3.78%		
WEC Energy Group (NYSE-WEC)	WEC	12.50%	32.00%	4.00%	0.01%	57.50%	0.01%	4.01%		
Xcel Energy Inc. (NYSE-XEL)	XEL	10.50%	37.00%	3.89%	1.64%	46.25%	0.76%	4.64%		
Mean		10.22%	34.45%	3.55%	1.77%	42.52%	0.78%	4.33%		
Median		10.00%	34.00%	3.47%	1.62%	42.00%	0.76%	4.42%		

Notes:
 Data Source: Value Line Investment Survey, dated May 15, 2020, June 12, 2020, and July 24, 2020.

Rocky Mountain Power
Exhibit RMP___(AEB-10R)
Docket No. 20-035-04
Witness: Ann E. Bulkley

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF UTAH

ROCKY MOUNTAIN POWER

Exhibit Accompanying Rebuttal Testimony of Ann E. Bulkley
Dr. Woolridge's 30-Day Constant Growth DCF - Electric Proxy Group

September 2020

30-Day Constant Growth DCF - Woolridge Electric Proxy Group

Company	[1] Annualized Dividend	[2] Dividend Yield	[3] Expected Dividend Yield	[4] Value Line Earnings Growth	[5] Yahoo Earnings Growth	[6] Zacks Earnings Growth	[7] Average Growth Rate	[8] Mean ROE
ALLETE, Inc. (NYSE-ALE)	\$ 2.47	4.34%	4.48%	5.50%	7.00%	N/A	6.25%	10.73%
Alliant Energy Corporation (NYSE-LNT)	\$ 1.52	3.07%	3.16%	6.50%	5.30%	5.54%	5.78%	8.94%
Ameren Corporation (NYSE-AEE)	\$ 1.98	2.67%	2.75%	6.00%	5.85%	6.75%	6.20%	8.95%
American Electric Power Co. (NYSE-AEP)	\$ 2.80	3.36%	3.46%	5.00%	5.82%	5.69%	5.50%	8.96%
Avangrid (NYSE-AGR)	\$ 1.76	3.98%	4.08%	6.00%	4.85%	5.54%	5.46%	9.55%
Avista Corporation (NYSE-AVA)	\$ 1.62	4.46%	4.55%	1.00%	6.00%	5.22%	4.07%	8.62%
CMS Energy Corporation (NYSE-CMS)	\$ 1.63	2.72%	2.82%	7.50%	7.08%	6.99%	7.19%	10.01%
Consolidated Edison, Inc. (NYSE-ED)	\$ 3.06	4.18%	4.23%	3.00%	2.65%	2.00%	2.55%	6.78%
Edison International (NYSE-EIX)	\$ 2.55	4.59%	4.64%	NA	1.30%	3.34%	2.32%	6.96%
Energy Corporation (NYSE-ETR)	\$ 3.72	3.82%	3.91%	3.00%	6.20%	5.73%	4.98%	8.89%
Energy, Inc. (NYSE-EVRG)	\$ 2.02	3.29%	3.36%	3.00%	4.10%	5.04%	4.05%	7.41%
Eversource Energy (NYSE-ES)	\$ 2.27	2.66%	2.74%	6.50%	6.22%	6.17%	6.30%	9.04%
Exelon Corporation (NYSE-EXC)	\$ 1.53	4.08%	4.11%	5.00%	-3.60%	4.00%	1.80%	5.91%
FirstEnergy Corporation (NYSE-FE)	\$ 1.56	4.13%	4.19%	8.50%	-2.40%	NA	3.05%	7.24%
Hawaiian Electric Industries (NYSE-HE)	\$ 1.32	3.63%	3.67%	3.50%	3.30%	1.67%	2.16%	5.83%
IDACORP, Inc. (NYSE-IDA)	\$ 2.68	3.01%	3.05%	3.50%	2.60%	2.63%	2.91%	5.96%
MGE Energy, Inc. (NYSE-MGEE)	\$ 1.48	2.30%	2.34%	4.00%	4.00%	4.31%	4.10%	6.45%
NextEra Energy, Inc. (NYSE-NEE)	\$ 5.88	2.29%	2.39%	10.00%	8.17%	7.85%	8.67%	11.06%
NorthWestern Corporation (NYSE-NWE)	\$ 2.40	4.42%	4.49%	1.50%	3.70%	3.39%	2.86%	7.35%
OG Energy Corp. (NYSE-OGE)	\$ 1.55	4.99%	5.07%	3.00%	2.40%	3.69%	3.03%	8.10%
Offer Tail Corporation (NDQ-OTTR)	\$ 1.48	3.83%	3.95%	3.50%	9.00%	N/A	6.25%	10.20%
Pinnacle West Capital Corp. (NYSE-PNW)	\$ 3.13	4.05%	4.14%	4.00%	4.36%	4.70%	4.35%	8.50%
PNM Resources, Inc. (NYSE-PNM)	\$ 1.23	3.13%	3.23%	6.00%	5.60%	6.19%	5.93%	9.16%
Portland General Electric Company (NYSE-POR)	\$ 1.54	3.62%	3.70%	4.00%	4.45%	5.27%	4.57%	8.27%
PPL Corporation (NYSE-PPL)	\$ 1.66	6.44%	6.52%	2.50%	2.90%	N/A	2.70%	9.22%
SEMPRA Energy (NYSE-SRE)	\$ 4.18	3.46%	3.58%	10.00%	5.35%	7.18%	7.51%	11.09%
Southern Company (NYSE-SO)	\$ 2.56	4.77%	4.86%	3.00%	4.53%	4.00%	3.84%	8.70%
WEC Energy Group (NYSE-WEC)	\$ 2.53	2.83%	2.92%	6.00%	5.96%	5.99%	5.98%	8.90%
Xcel Energy, Inc. (NYSE-XEL)	\$ 1.72	2.66%	2.74%	6.00%	6.10%	6.05%	6.05%	8.79%
Mean [9]:								9.03%

Notes:

- [1] JRW-7.2
- [2] JRW-7.2
- [3] Equals [2] X (1 + .5 X [7])
- [4] JRW-7.4
- [5] JRW-7.5
- [6] JRW-7.5
- [7] Equals average of [4], [5], and [6]
- [8] Equals [2] X (1 + .5 X [7]) + [7]
- [9] Excludes companies with ROEs less than 7%.

90-Day Constant Growth DCF - Woolridge Electric Proxy Group

Company	[1] Annualized Dividend	[2] Dividend Yield	[3] Expected Dividend Yield	[4] Value Line Earnings Growth	[5] Yahoo Earnings Growth	[6] Zacks Earnings Growth	[7] Average Growth Rate	[8] Mean ROE
ALLETE, Inc. (NYSE-ALE)	\$ 2.47	4.34%	4.48%	5.50%	7.00%	N/A	6.25%	10.73%
Alliant Energy Corporation (NYSE-LNT)	\$ 1.52	3.13%	3.22%	6.50%	5.30%	5.54%	5.78%	9.00%
Ameren Corporation (NYSE-AEE)	\$ 1.98	2.72%	2.81%	6.00%	5.85%	6.75%	6.20%	9.01%
American Electric Power Co. (NYSE-AEP)	\$ 2.80	3.43%	3.52%	5.00%	5.82%	5.69%	5.50%	9.03%
Avangrid (NYSE-AGR)	\$ 1.76	4.08%	4.19%	6.00%	4.85%	5.54%	5.46%	9.65%
Avista Corporation (NYSE-AVA)	\$ 1.62	4.18%	4.27%	1.00%	6.00%	5.22%	4.07%	8.34%
CMS Energy Corporation (NYSE-CMS)	\$ 1.63	2.80%	2.91%	7.50%	7.08%	6.99%	7.19%	10.10%
Consolidated Edison, Inc. (NYSE-ED)	\$ 3.06	4.05%	4.10%	3.00%	2.65%	2.00%	2.55%	6.65%
Edison International (NYSE-EIX)	\$ 2.55	4.55%	4.60%	NA	1.30%	3.34%	2.32%	6.92%
Energy Corporation (NYSE-ETR)	\$ 3.72	3.85%	3.95%	3.00%	6.20%	5.73%	4.98%	8.93%
Eversource Energy (NYSE-ES)	\$ 2.02	3.42%	3.49%	3.00%	4.10%	5.04%	4.05%	7.53%
Exelon Corporation (NYSE-EXC)	\$ 2.27	2.75%	2.83%	6.50%	6.22%	6.17%	6.30%	9.13%
FirstEnergy Corporation (NYSE-FE)	\$ 1.53	4.14%	4.18%	5.00%	-3.60%	4.00%	1.80%	5.98%
Hawaiian Electric Industries (NYSE-HE)	\$ 1.56	3.91%	3.97%	8.50%	-2.40%	NA	3.05%	7.02%
IDACORP, Inc. (NYSE-IDA)	\$ 1.32	3.45%	3.49%	1.50%	3.30%	1.67%	2.16%	5.64%
MGE Energy, Inc. (NYSE-MGEE)	\$ 2.68	2.99%	3.04%	3.50%	2.60%	2.63%	2.91%	5.95%
NextEra Energy, Inc. (NYSE-NEE)	\$ 1.48	2.29%	2.33%	4.00%	4.00%	4.31%	4.10%	6.44%
NorthWestern Corporation (NYSE-NWE)	\$ 5.88	2.43%	2.53%	10.00%	8.17%	7.85%	8.67%	11.21%
OGE Energy Corp. (NYSE-OGI)	\$ 2.40	4.25%	4.31%	1.50%	3.70%	3.39%	2.86%	7.17%
Otter Tail Corporation (NDQ-OTTR)	\$ 1.55	5.08%	5.16%	3.00%	2.40%	3.69%	3.03%	8.19%
Pinnacle West Capital Corp. (NYSE-PNW)	\$ 1.48	3.60%	3.71%	3.50%	9.00%	N/A	6.25%	9.96%
PNM Resources, Inc. (NYSE-PNM)	\$ 3.13	4.13%	4.22%	4.00%	4.36%	4.70%	4.35%	8.57%
Portland General Electric Company (NYSE-POR)	\$ 1.23	3.12%	3.21%	6.00%	5.60%	6.19%	5.93%	9.14%
PPL Corporation (NYSE-PPL)	\$ 1.54	3.44%	3.52%	4.00%	4.45%	5.27%	4.57%	8.09%
SEMPRA Energy (NYSE-SRE)	\$ 1.66	6.53%	6.61%	2.50%	2.90%	N/A	2.70%	9.31%
Southern Company (NYSE-SO)	\$ 4.18	3.46%	3.59%	10.00%	5.35%	7.18%	7.51%	11.10%
WEC Energy Group (NYSE-WEC)	\$ 2.56	4.69%	4.78%	3.00%	4.53%	4.00%	3.84%	8.62%
Xcel Energy, Inc. (NYSE-XEL)	\$ 2.53	2.83%	2.92%	6.00%	5.96%	5.99%	5.98%	8.90%
Mean [9]:	\$ 1.72	2.74%	2.83%	6.00%	6.10%	6.05%	6.05%	9.03%

Notes:

- [1] JRW-7.2
- [2] JRW-7.2
- [3] Equals [2] X (1 + .5 X [7])
- [4] JRW-7.4
- [5] JRW-7.5
- [6] JRW-7.5
- [7] Equals average of [4], [5], and [6]
- [8] Equals [2] X (1 + .5 X [7]) + [7]
- [9] Excludes companies with ROEs less than 7%.

180-Day Constant Growth DCF - Woolldige Electric Proxy Group

Company	[1] Annualized Dividend	[2] Dividend Yield	[3] Expected Dividend Yield	[4] Value Line Earnings Growth	[5] Yahoo Earnings Growth	[6] Zacks Earnings Growth	[7] Average Growth Rate	[8] Mean ROE
ALLETE, Inc. (NYSE-ALE)	\$ 2.47	3.67%	3.79%	5.50%	7.00%	N/A	6.25%	10.04%
Alliant Energy Corporation (NYSE-LNT)	\$ 1.52	2.95%	3.04%	6.50%	5.30%	5.54%	5.78%	8.82%
Ameren Corporation (NYSE-AEE)	\$ 1.98	2.64%	2.72%	6.00%	5.85%	6.75%	6.20%	8.92%
American Electric Power Co. (NYSE-AEP)	\$ 2.80	3.19%	3.28%	5.00%	5.82%	5.69%	5.50%	8.78%
Avangrid (NYSE-AGR)	\$ 1.76	3.79%	3.89%	6.00%	4.85%	5.54%	5.46%	9.35%
Avista Corporation (NYSE-AVA)	\$ 1.62	3.74%	3.82%	1.00%	6.00%	5.22%	4.07%	7.89%
CMS Energy Corporation (NYSE-CMS)	\$ 1.63	2.69%	2.79%	7.50%	7.08%	6.99%	7.19%	9.98%
Consolidated Edison, Inc. (NYSE-ED)	\$ 3.06	3.76%	3.80%	3.00%	2.65%	2.00%	2.55%	6.35%
Edison International (NYSE-EIX)	\$ 2.55	4.05%	4.10%	NA	1.30%	3.34%	2.32%	6.42%
Energy Corporation (NYSE-ETR)	\$ 3.72	3.45%	3.54%	3.00%	6.20%	5.73%	4.98%	8.52%
Energy, Inc. (NYSE-EVRG)	\$ 2.02	3.26%	3.32%	3.00%	4.10%	5.04%	4.05%	7.37%
Eversource Energy (NYSE-ES)	\$ 2.27	2.70%	2.79%	6.50%	6.22%	6.17%	6.30%	9.08%
Exelon Corporation (NYSE-EXC)	\$ 1.53	3.76%	3.79%	5.00%	-3.60%	4.00%	1.80%	5.59%
FirstEnergy Corporation (NYSE-FE)	\$ 1.56	3.58%	3.64%	8.50%	-2.40%	NA	3.05%	6.69%
Hawaiian Electric Industries (NYSE-HE)	\$ 1.32	3.15%	3.19%	1.50%	3.30%	1.67%	2.16%	5.34%
IDACORP, Inc. (NYSE-IDA)	\$ 2.68	2.76%	2.81%	3.50%	2.60%	2.63%	2.91%	5.72%
MGE Energy, Inc. (NYSE-MGEE)	\$ 1.48	2.10%	2.15%	4.00%	4.00%	4.31%	4.10%	6.25%
NextEra Energy, Inc. (NYSE-NEE)	\$ 5.88	2.41%	2.52%	10.00%	8.17%	7.85%	8.67%	11.19%
NorthWestern Corporation (NYSE-NWE)	\$ 2.40	3.76%	3.82%	1.50%	3.70%	3.39%	2.86%	6.68%
OG Energy Corp. (NYSE-OG)	\$ 1.55	4.32%	4.38%	3.00%	2.40%	3.69%	3.03%	7.41%
Otter Tail Corporation (NDQ-OTTR)	\$ 1.48	3.25%	3.35%	3.50%	9.00%	N/A	6.25%	9.60%
Pinnacle West Capital Corp. (NYSE-PNW)	\$ 3.13	3.79%	3.87%	4.00%	4.36%	4.70%	4.35%	8.22%
PNM Resources, Inc. (NYSE-PNM)	\$ 1.23	2.77%	2.85%	6.00%	5.60%	6.19%	5.93%	8.78%
Portland General Electric Company (NYSE-POR)	\$ 1.54	3.07%	3.14%	4.00%	4.45%	5.27%	4.57%	7.71%
PPL Corporation (NYSE-PPL)	\$ 1.66	5.68%	5.76%	2.50%	2.90%	N/A	2.70%	8.46%
SEMPRA Energy (NYSE-SRE)	\$ 4.18	3.16%	3.27%	10.00%	5.35%	7.18%	7.51%	10.78%
Southern Company (NYSE-SO)	\$ 2.56	4.36%	4.45%	3.00%	4.53%	4.00%	3.84%	8.29%
WEC Energy Group (NYSE-WEC)	\$ 2.53	2.77%	2.85%	6.00%	5.96%	5.99%	5.98%	8.83%
Xcel Energy, Inc. (NYSE-XEL)	\$ 1.72	2.72%	2.80%	6.00%	6.10%	6.05%	6.05%	8.85%
Mean [9]:								8.90%

Notes:

- [1] JRW-7.2
- [2] JRW-7.2
- [3] Equals [2] X (1 + .5 X [7])
- [4] JRW-7.4
- [5] JRW-7.5
- [6] JRW-7.5
- [7] Equals average of [4], [5], and [6]
- [8] Equals [2] X (1 + .5 X [7]) + [7]
- [9] Excludes companies with ROEs less than 7%.

Rocky Mountain Power
Exhibit RMP__(AEB-11R)
Docket No. 20-035-04
Witness: Ann E. Bulkley

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF UTAH

ROCKY MOUNTAIN POWER

Exhibit Accompanying Rebuttal Testimony of Ann E. Bulkley

Risk Premium Analysis - Excluding Settled Cases

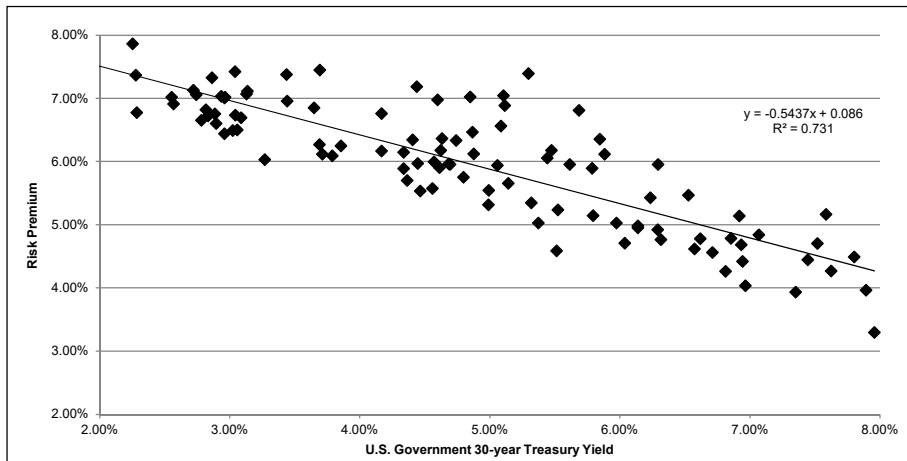
September 2020

Risk Premium -- Vertically Integrated Electric
 (Excluding Settled Cases)

	[1]	[2]	[3]
	Average Authorized VI Electric ROE	U.S. Govt. 30-year Treasury	Risk Premium
1992.1	12.29%	7.80%	4.49%
1992.2	11.86%	7.89%	3.96%
1992.3	11.89%	7.45%	4.45%
1992.4	12.23%	7.52%	4.71%
1993.1	11.91%	7.07%	4.84%
1993.2	11.64%	6.86%	4.79%
1993.3	11.08%	6.31%	4.77%
1993.4	11.09%	6.14%	4.95%
1994.1	11.19%	6.57%	4.62%
1994.2	11.29%	7.35%	3.93%
1994.3	12.75%	7.58%	5.17%
1994.4	11.25%	7.96%	3.30%
1995.1	11.90%	7.63%	4.27%
1995.2	11.36%	6.94%	4.42%
1995.3	11.28%	6.71%	4.56%
1995.4	11.67%	6.23%	5.43%
1996.1	12.25%	6.29%	5.96%
1996.2	12.06%	6.92%	5.14%
1996.3	11.00%	6.96%	4.04%
1996.4	11.40%	6.62%	4.78%
1997.1	11.08%	6.81%	4.27%
1997.2	11.62%	6.93%	4.68%
1997.3	12.00%	6.53%	5.47%
1997.4	11.12%	6.14%	4.98%
1998.1	12.00%	5.88%	6.12%
1998.2	12.20%	5.85%	6.35%
1998.3	11.65%	5.47%	6.18%
1998.4	12.15%	5.10%	7.05%
1999.1	10.40%	5.37%	5.03%
1999.2	10.94%	5.79%	5.15%
1999.3	10.75%	6.04%	4.71%
2000.1	11.21%	6.29%	4.92%
2000.2	11.00%	5.97%	5.03%
2000.3	11.68%	5.79%	5.89%
2000.4	12.50%	5.69%	6.81%
2001.1	11.50%	5.44%	6.06%
2001.3	10.76%	5.52%	5.24%
2001.4	12.69%	5.30%	7.39%
2002.1	10.10%	5.51%	4.59%
2002.2	11.57%	5.61%	5.95%
2002.3	11.65%	5.08%	6.57%
2003.1	11.88%	4.85%	7.03%
2003.2	11.58%	4.60%	6.98%
2003.4	12.00%	5.11%	6.89%
2004.1	11.00%	4.88%	6.12%
2004.2	10.67%	5.32%	5.35%
2004.3	11.00%	5.06%	5.94%
2004.4	11.33%	4.86%	6.47%
2005.1	10.65%	4.69%	5.96%
2005.2	10.00%	4.47%	5.53%
2005.3	11.63%	4.44%	7.19%
2005.4	10.65%	4.68%	5.97%
2006.1	11.00%	4.63%	6.37%
2006.2	10.80%	5.14%	5.66%
2006.3	10.54%	4.99%	5.55%
2006.4	11.08%	4.74%	6.34%
2007.1	10.55%	4.80%	5.75%
2007.2	10.31%	4.99%	5.32%
2007.4	10.52%	4.61%	5.90%
2008.1	10.75%	4.41%	6.34%
2008.2	10.57%	4.57%	6.00%
2008.3	10.42%	4.44%	5.97%
2008.4	10.50%	3.65%	6.85%
2009.1	10.82%	3.44%	7.38%
2009.2	10.93%	4.17%	6.76%
2009.4	10.48%	4.34%	6.15%
2010.1	10.80%	4.62%	6.18%
2010.2	10.07%	4.36%	5.70%
2010.3	10.11%	3.86%	6.25%
2010.4	10.34%	4.17%	6.17%
2011.1	10.13%	4.56%	5.57%
2011.2	10.23%	4.34%	5.89%
2011.3	11.14%	3.69%	7.45%
2011.4	10.47%	3.04%	7.43%
2012.1	10.25%	3.14%	7.11%
2012.2	9.97%	2.93%	7.04%
2012.3	9.80%	2.74%	7.06%
2012.4	10.19%	2.86%	7.33%

Risk Premium -- Vertically Integrated Electric
 (Excluding Settled Cases)

	[1]	[2]	[3]
	Average Authorized VI Electric ROE	U.S. Govt. 30-year Treasury	Risk Premium
2013.1	10.20%	3.13%	7.07%
2013.3	9.83%	3.71%	6.12%
2013.4	9.88%	3.79%	6.09%
2014.1	9.96%	3.69%	6.27%
2014.2	10.40%	3.44%	6.96%
2014.4	9.98%	2.96%	7.02%
2015.1	9.57%	2.55%	7.02%
2015.2	9.64%	2.88%	6.76%
2015.3	9.40%	2.96%	6.44%
2015.4	9.97%	2.96%	7.01%
2016.1	9.85%	2.72%	7.13%
2016.2	9.48%	2.57%	6.91%
2016.3	9.65%	2.28%	7.37%
2016.4	9.56%	2.83%	6.72%
2017.1	9.78%	3.04%	6.73%
2017.2	9.50%	2.90%	6.60%
2017.4	9.64%	2.82%	6.82%
2018.1	9.52%	3.02%	6.49%
2018.2	9.78%	3.09%	6.70%
2018.3	9.56%	3.06%	6.50%
2018.4	9.30%	3.27%	6.03%
2019.2	9.44%	2.78%	6.66%
2019.3	9.06%	2.29%	6.77%
2019.4	10.12%	2.25%	7.87%
2020.1	9.67%	1.89%	7.78%
AVERAGE	10.79%	4.82%	5.98%
MEDIAN	10.76%	4.74%	6.12%



SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.85496
R Square	0.73096
Adjusted R Square	0.72830
Standard Error	0.00522
Observations	103

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	0.007481	0.007481	274.407503	0.000000
Residual	101	0.002753	0.000027		
Total	102	0.010234			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	0.0860	0.00166	51.72	0.000000	0.082670	0.089264	0.082670	0.089264
U.S. Govt. 30-year Treasury	(0.5437)	0.03282	(16.57)	0.000000	(0.608799)	(0.478583)	(0.608799)	(0.478583)

	[7]	[8]	[9]
	U.S. Govt. 30-year Treasury	Risk Premium	ROE
Current 30-day average of 30-year U.S. Treasury bond yield [4]	1.56%	7.75%	9.31%
Blue Chip Near-Term Projected Forecast (Q3 2020 - Q3 2021) [5]	1.80%	7.62%	9.42%
Blue Chip Long-Term Projected Forecast (2021-2025) [6]	3.20%	6.86%	10.06%
AVERAGE			9.59%

Notes:

- [1] Source: Regulatory Research Associates, rate cases through March 31, 2020
- [2] Source: Bloomberg Professional, quarterly bond yields are the average of each trading day in the quarter
- [3] Equals Column [1] - Column [2]
- [4] Source: Bloomberg Professional, 30-day average as of March 31, 2020
- [5] Source: Blue Chip Financial Forecasts, Vol. 39, No. 4, April 1, 2020, at 2
- [6] Source: Blue Chip Financial Forecasts, Vol. 38, No. 12, December 1, 2019, at 14
- [7] See notes [4], [5] & [6]
- [8] Equals $0.085967 + (-0.543691 \times \text{Column [7]})$
- [9] Equals Column [7] + Column [8]