BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

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. 20-035-04** **Exhibit No. DPU 2.0 DIR**

FOR THE DIVISION OF PUBLIC UTILITIES
DEPARTMENT OF COMMERCE
STATE OF UTAH

Direct Testimony of

Casey J. Coleman

August 20, 2020

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I. INTRODUCTION

Q. PLEASE STATE YOUR NAME, EMPLOYER, AND BUSINESS ADDRESS.

A. My name is Casey J. Coleman. I am employed by the Division of Public Utilities (Division) for the State of Utah. My business address is 160 East 300 South Salt Lake City, UT 84114.

Q. BRIEFLY OUTLINE YOUR EMPLOYMENT BACKGROUND.

A. I have worked for the Division for almost nineteen years working as both a Utility Analyst and Utility Technical Consultant. One of my primary responsibilities as Utility Technical Consultant for the Division has been testifying before the Public Service Commission of Utah (Commission) as the Cost of Equity expert for the natural gas, water, and telecommunications rate cases.

Q. WHAT IS YOUR EDUCATIONAL BACKGROUND?

A. I received a Bachelor of Science degree in Finance from Weber State University in 1996 and a Masters of Business Administration from Utah State University in 2001.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE COMMISSION?

A. Yes. I testified before the Commission as an expert witness in Docket Nos. 02-049-82, 03-049-49, 03-049-50, 05-053-01, 05-2302-01, 07-2476-01, 08-2469-01, 10-049-16, 10-2521-01, 10-2526-01, 08-046-01, 15-042-01, 15-2302-01, 17-098-01, and 19-057-02.

Q. WERE THESE ELECTRIC UTILITY RATE CASES?

A. No. However, the ratemaking principles I applied in those cases and address in this testimony are applicable to any cost of equity analysis.

II. SUMMARY

Q. PLEASE BRIEFLY SUMMARIZE THE WORK AND INVESTIGATIONS THAT YOU HAVE PERFORMED IN THIS MATTER.

A. I have reviewed and analyzed the testimonies of Rocky Mountain Power (RMP or the Company) witnesses Ms. Nikki L. Kobilha and Ms. Ann E. Bulkley. Ms. Kobilha provided testimony regarding the cost of debt, and the capital structure of RMP. Ms. Bulkley's testimony presents her analysis regarding the appropriate return on equity (ROE) for RMP's electric utility operations in Utah as well as an assessment of its proposed capital structure to be used for ratemaking purposes.

I have also performed my own independent estimation of cost of capital, particularly with respect to the cost of equity[1] and an appropriate capital structure for RMP.

Q. PLEASE SUMMARIZE AND DESCRIBE THE PURPOSE OF YOUR TESTIMONY.

A. In a cost of equity order, the Commission, discussed how "applying models requires judgment at each important step."[2] The Commission continued stating each "financial model analysis will provide a good framework for analysis and a useful means of

[1] Throughout my direct testimony, I interchangeably use the terms "ROE" and "cost of equity".

[2] See Utah Public Service Commission Report and Order Docket No. 02-057-02 page 19

organizing relevant information, but not objective cost-of-equity estimates. Assessments of other, including qualitative information is necessary."[3] In a Cost of Capital primer prepared by National Association of Regulatory Commissions (NARUC) for United States Agency for International Development (USAID) offered the same point.

> An ROE recommendation by a witness or an ROE decision by a regulator requires both the application of financial models and the use of informed judgment. An ROE based solely on judgment would be inappropriate, as would be an ROE that relied solely on the mechanistic and arbitrary application of financial models. In my opinion, it is common for regulatory commissions to acknowledge that any financial model, no matter how conceptually appealing and well-supported, needs to be supplemented with informed judgment. Commissions are on a constant quest to balance the theoretical with the practical.[4]

The purpose of my testimony is to provide the data and analysis that provides a reasonable framework for rate making purposes. I present evidence using generally accepted evaluation methods including: the Capital Asset Pricing Model (CAPM), the Constant Growth Discounted Cash Flow (DCF) model, and a Risk Premium method.

My direct testimony also provides additional information, including a review of the Return on Equity trend for electric utilities and a discussion on the appropriate cost of debt, and the appropriate capital structure for RMP.

[3] See Utah Public Service Commission Report and Order Docket No. 02-057-02 page 19.

[4] National Association of Regulatory Utility Commissioners, A Cost of Capital and Capital Markets Primer for Utility Regulators, April 2020 page 20.

Finally, I take the data and analysis I completed and discuss how that information should be applied in The Company's rate making proceeding in this docket. My testimony recommends an appropriate capital structure, an overall rate of return, and a return on equity, that RMP should be allowed the opportunity to earn.

Q. PLEASE SUMMARIZE YOUR CONCLUSIONS.

A. I have concluded that the appropriate cost of equity for RMP is 9.25 percent. The current market conditions support a reasonable range for cost of equity between 7.24 percent and 9.17 percent.

The Division supports the Company's requested capital structure. To compensate RMP as a vertically integrated electric utility, the Commission should approve the proposed capital structure which has a higher equity portion than RMP has used in the past.

Generally, the Company's long-term cost of debt calculations as presented in Ms. Kobliha's direct testimony RMP Exhibit NLK-1, of 4.81 percent is reasonable for RMP.

Q. WHAT IS THE COMPANY'S FILED POSITION REGARDING COST OF CAPITAL?

A. In its filing dated May 8, 2020, the Company asked for the cost of capital rates of return listed on the next page.[5]

[5] Rocky Mountain Power, Direct Testimony of Nikki L. Kobliha line 41.

Table 1

	Rate	Capital Structure	Weighted Rate
Common Stock	10.20%	53.67%	5.47%
Preferred Stock	6.75%	0.01%	0.00%
Long-term Debt	4.81%	46.32%	2.23%
WACC		100.0%	7.70%

The 10.20 percent cost of equity recommendation by RMP is outside the reasonable range, on the high side. The reasonable range for RMP's cost of equity is currently 7.24 percent to 9.17 percent. I recommend that RMP's authorized cost of equity be set at 9.25 percent.

DPU Exhibit 2.02 DIR summarizes the capital structure and cost of capital point estimates supported by the Division. The final weighted average cost of capital is 7.19 percent. The following table summarizes the capital structure and cost of capital point estimates supported by the Division.

Table 2

	Rate	Capital Structure	Weighted Rate
Common Stock	9.25%	53.67%	4.96%
Preferred Stock	6.75%	0.01%	0.00%
Long-term Debt	4.81%	46.32%	2.23%
WACC		100.0%	7.19%

III. PRINCIPLES OF RATE REGULATION

Q. WHAT ARE THE PRINCIPLES GUIDING FAIR RATES OF RETURN IN THE CONTEXT OF RATE REGULATION?

A. In a market system, competition generally determines the price for goods and services. Public utilities are permitted to operate as monopolies or near monopolies because: (1) the services provided by utilities are considered necessities by society; and (2) capital-intensive and long-lived facilities are necessary to provide utility service and the construction of multiple, competitive networks of facilities would cost customers more. Generally, utilities are required to serve all customers in their service territory at reasonable rates determined by regulators. As a result, regulators act as something of a substitute for a competitive free-market system when they authorize rates for utility service.

Although utilities operate in varying degrees as regulated monopolies, they must compete with governmental bodies, non-regulated industries, and other utilities for labor, materials, and capital. Capital is provided by investors who seek the highest return commensurate with the perceived level of risk; the greater the perceived risk, the higher the required return rate. In order for utilities to attract the capital required to provide service, a fair rate of return should roughly equal an investor required, market-determined rate of return.

Q. WHAT CONSTITUTES A FAIR RATE OF RETURN?

A. Two noted Supreme Court cases define the benchmarks of fair rate of return. In *Bluefield,*[6] a fair rate of return is defined as: (1) equal to the return on investments in other business undertakings with the same level of risks (the comparable earnings

[6] Bluefield Water Works & Improvement Company v P.S.C. of West Virginia, 262 U.S. 679 (1923).

standard); (2) sufficient to assure confidence in the financial soundness of a utility (the financial integrity standard); or (3) adequate to permit a public utility to maintain and support a reasonable credit rating, enabling the utility to raise or attract additional capital necessary to provide reliable service (the capital attraction standard). The second case, *Hope,*[7] determined a fair rate of return to be based upon guidelines found in *Bluefield* as well as stating that: (1) allowed revenues must cover capital costs, including service on debt and dividends on stock; and (2) the Federal Power Commission was not bound to use any single formula or combination of formulae in determining rates. Utilities are not entitled to a guaranteed return. However, the regulatory-determined price for service must allow the utility a fair opportunity to recover all costs associated with providing service, including a fair rate of return.

Q. GENERALLY, HOW HAVE REGULATORY COMMISSIONS DETERMINED A FAIR RATE OF RETURN FOR A REGULATED UTILITY?

A. Recently, Regulatory Research Associates (RRA), a group within S&P Global Market Intelligence, gave a succinct overview of the regulatory process and how various commissions have calculated a fair rate of return. The report states:

> Historically, there have been two approaches in calculating ROE in regulatory proceedings, a comparable earnings approach and a market analysis. In a comparable earnings approach, similar investments with similar risks are analyzed to determine an appropriate ROE. The firms selected and the time period selected for comparison purposes are subjective elements of this analysis. By contrast, the market analysis involves more detailed calculations and assumptions and relies on data from the broader securities market.

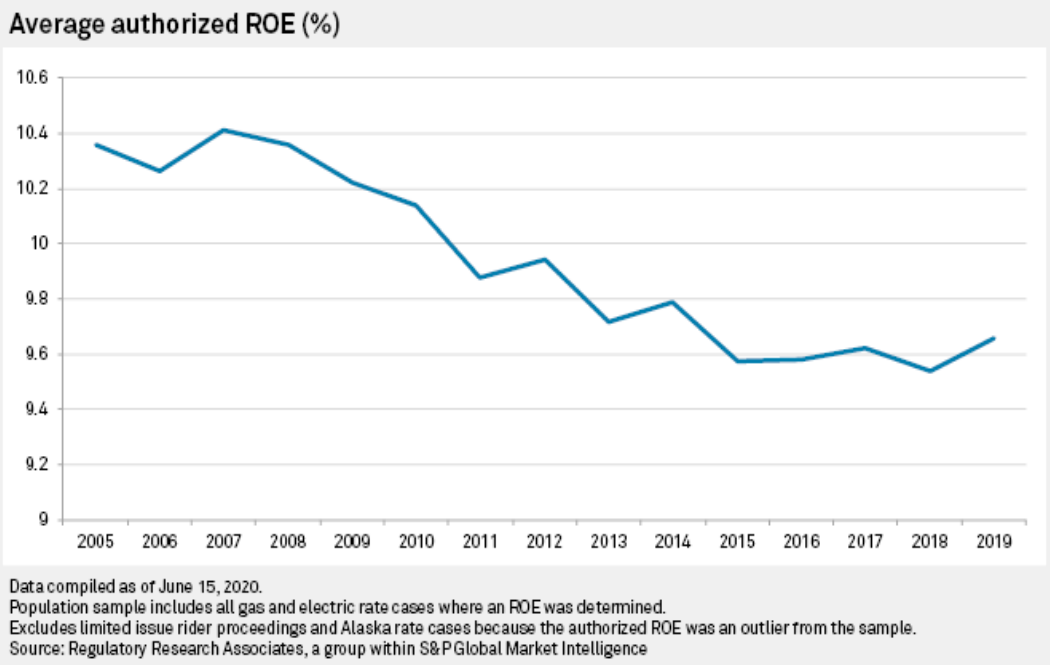
[7] Federal Power Commission v. Hope Natural Gas Company, 320 U.S. 591, 602-603, (1944).

Two market-based methodologies favored in utility rate case testimony are the discounted cash flow, or DCF, analysis, and the capital asset pricing model, or CAPM, approach. These techniques are among the select few consistently recognized by utility commissions.

Similar to the CAPM, the risk premium method, or RPM, measures a company's cost of equity capital by adding a risk premium to a risk-free long-term Treasury bond or yield on a utility bond similarly rated by credit ratings agencies. The risk premium is typically estimated using a variety of approaches, some of which incorporate forward-looking estimates of the cost of equity, and others that consider historical estimates.[8]

Q. DID RRA HAVE AN OPINION ABOUT THE TREND OF AUTHORIZED RETURNS?

A. Yes. RRA created the chart showing the trend for average authorized ROE and stated:



Equity returns authorized in electric and gas utility rate cases have generally trended downwards over the past 15 years consistent with declining interest rates. In addition, the proliferation of automatic

[8] S & P Global Market Intelligence RRA Regulatory Focus, The rate case process: establishing a fair rate of return for regulated utilities. June 29, 2020.

> adjustment and investment recovery mechanisms that reduce utility business risk have been cited, at times, as a contributing factor by commissions in authorizing lower ROEs.[9]
>
> The table above excludes ROEs determined in limited issue proceedings and certain rate cases decided in the state of Alaska, which represent outliers from the general sample. The Regulatory Commission of Alaska typically awards much higher than average ROEs to compensate utilities for the difficult terrain and environmental conditions they face as well as regulatory lag associated with lengthy rate case proceedings.[10]

Q. WHAT HAS RRA OBSERVED FROM ITS DATA CONCERNING INDUSTRY ROE AVERAGES AND THE VARIANCE IN THOSE AVERAGES?

A. In the same report dated June 29, 2020 RRA explained:

> RRA tracks trends in industry ROE averages and compares commission authorized-ROEs to the industry average in the time period it was established. In some cases, authorized ROEs have been significantly above or below prevailing industry averages at the time established.
>
> The variance in authorized ROEs over the years has remained fairly consistent, with the one standard deviation amounting to a range of roughly 40-50 basis points above and below the industry average. Statistically speaking, 68% of a sample population should occur within one standard deviation of a normal distribution; returns above and below one standard deviation could be viewed more significantly different than the RRA average. For example, the majority of ROE authorizations during a year when the average ROE was 9.5% would roughly fall into the range of 9.0%-10.0%.[11]

Q. WHAT IS THE AVERAGE ROE FOR ELECTRIC UTILITIES AS OF JULY 1, 2020?

[9] Id.

[10] Id.

[11] Id.

A. As DPU Exhibit 2.07 demonstrates, S&P Global Market Intelligence calculated the average ROE for electric utilities as of July 1, 2020. The information provided by RRA shows each allowed rate of return decided by different state commissions in 2020. The average rate of return for each docket is as follows:

Category	Average Return on Equity
Average Year-to-Date	9.55%
Settled Average	9.53%
Litigated Average	9.58%
Vertically Integrated	9.67%
Exclude Limited Use Rider	9.33%

Q. WHAT IS THE VALUE IN KNOWING THE AVERAGE ROE FOR ELECTRIC UTILITIES AS OF JULY 1, 2020?

A. Knowing the average return on equity for electricity companies along with the variance analysis done by RRA enables parties to calculate a reasonable range of ROE for RMP. Using the average year-to-date ROE of 9.55 percent and the 40-50 basis points in variance as determined by RRA, the reasonable range for an electric utility would be 9.05 percent on the low end to 10.05 percent on the high end. Even when looking at the vertically integrated electric utilities the range would be 9.17 percent on the low end to 10.17 on the high end. Similarly, the range for electric utilities after excluding the returns for limited use riders would be 8.83 percent on the low end and 9.83 percent on the high end.

Q. MS. BULKLEY RECOMMENDED A ROE OF 10.2 PERCENT FOR ROCKY MOUNTAIN POWER. WHAT DOES THAT RECOMMENDATION MEAN?

A. Ms. Bulkley and I have a fundamental disagreement about the relative riskiness of RMP in relation to the other utility companies in the market. The cost of equity approved by other commissions for regulated electric utility companies has been trending downward, over the last few of years. In the last rate case, the Commission approved a cost of equity of 9.80 percent for RMP.

Ms. Bulkley's conclusion that RMP's cost of equity should be in the range of 9.75 percent to 10.20 percent requires that investors would have to believe RMP is a risky investment relative to other utilities. Generally, a rate increase to 10.2 percent would mean either market conditions have significantly changed or RMP's risks have increased since the last general rate case in 2014 and investors are requiring a higher return because of the additional risks encountered by the Company.

As stated by Ms. Bulkley, "investors are considering the authorized returns across the U.S. and are likely to invest in those utilities with the highest returns".[12] Additionally, to accept the proposed range suggested by Ms. Bulkley, implicitly, one must conclude that RMP is a higher risk than the other subsidiaries of PacifiCorp and riskier than a comparable group of regulated electric utilities. Ms. Bulkley states this point in her testimony when she concludes "authorizing an ROE for RMP that is equivalent to the average authorized ROE for other vertically integrated electric utilities is not sufficient to compensate investors for the added risk of RMP."[13]

[12] Rocky Mountain Power, Direct Testimony of Ms. Ann E. Bulkley lines 1416—1417.

[13] Id, lines 1420-1421.

Continuing with this point Ms. Bulkley suggested, "it is important that the Commission consider, as I have in my recommendation, the additional risk of RMP and place the authorized ROE for RMP towards the high end of authorized ROEs for other vertically integrated electric utilities."[14] To support her premise, Ms. Bulkley discusses Capital Expenditures, Regulatory Risk, and Generation Ownership, and how those specific risks, in her opinion, make RMP a riskier investment supporting a higher ROE.

RMP is not riskier than other PacifiCorp subsidiaries or comparable regulated electric utilities. Later in my testimony I will show how the specific risks detailed by Ms. Bulkley, (Capital Expenditures, Regulatory Risk, and Generation Ownership) do not make RMP a riskier investment. Therefore, the proposed range or rates suggested by Ms. Bulkley are not supported by comparison of known rates of return for comparable alternative investments, and are not in the public interest.

Furthermore, the cost of equity ranges proposed by Ms. Bulkley for RMP are not consistent with published market returns. For example, the Company's proposal is significantly higher than the 8.50 percent Duff and Phelps has calculated for the returns of the total stock market. [15] A rate of return above 8.50 percent suggests that RMP has a higher risk than average market investments. It is not reasonable to conclude that RMP has greater investment risk than the stock market and should require a higher return. I would instead submit that a regulated utility is considerably less risky than the average

[14] Id, lines 1422-1425.

[15] See DPU Exhibit 3.06 DIR.

stock in the market because of the benefits of utility regulation.

My testimony shows that RMP, as a regulated utility, is less risky than the entire stock market and does not have a higher risk than any comparable set of utility companies. Nevertheless, we recommend a return of 9.25 percent consistent with our analysis and comparisons to a proxy group of companies.

IV. CONCERNS WITH ROCKY MOUNTAIN POWER'S ANALYSIS

Q. DO YOU HAVE ANY CONCERNS OR DISAGREEMENTS WITH THE COMPANY'S INFORMATION RELATED TO ITS COST OF CAPITAL CALCULATION?

A. Yes. Although the approaches used by Ms. Bulkley to estimate the cost of equity in this case are generally consistent with previous general rate cases filed by RMP and some are similar to the approaches used in my analysis, I have identified the following areas of concern and disagreement with Ms. Bulkley's analysis and testimony.

1. According to Ms. Bulkley, "[r]ecent market conditions reflect short-term exogenous shocks that are not expected to persist over the long term. As a result, the recent atypical market conditions do not reflect the market conditions that should be expected to be present when the rates for RMP will be in effect."[16]

To adjust for these "atypical" market conditions, Ms. Bulkley feels it is critical to use "forward looking assumptions to estimate the cost of equity."[17] The Division is highly

[16] See Rocky Mountain Power, Direct Testimony of Ann E. Bulkley, lines 727 – 730.

[17] Id, lines 733—735.

uncomfortable with the use of "forward looking assumptions" to calculate the ROE for RMP. Calculating an appropriate ROE for a company is already difficult and requires a solid framework of analysis from a variety of ROE estimation models and judgment at each important step. Although ratemaking is both an art and a science, if the inputs or assumptions of the model are flawed then the analysis and judgment will be equally flawed.

The biggest concern the Division has, is the significant potential for flawed data when using forward-looking assumptions to estimate the cost of equity. In a rate making proceeding where even small percentages can have significant impacts, there should be caution in the use of forward looking projections. The longer the horizon with the projections the greater the likelihood of flawed assumptions and judgment which would over of understate the correct ROE for RMP. The Division is not comfortable trying to project that far into the future to set the appropriate return on equity for RMP.

The Commission in past rate cases has generally avoided using data points that included projected calculations or assumptions and used the best data available at the time of the general rate case. The Commission should place little if any weight or merit to models that are using forward-looking[18] assumptions when there is current data available.

[18] The Division recognizes that at times the Commission has used "forward-looking" information. An excellent example is using a forward-looking test year. The major difference is that a forward-looking test year is allowed by statute, reviewed by the parties and agreed upon as part of the general rate case. Additionally, the future projections are being made by RMP on its business. There is a higher level of comfort with this type of projection where costs, rate base, and other items are easier to control by the

2. The DCF model calculation in RMP AEB-4 Constant Growth DCF Model does not use the 75 percent earnings growth and 25 percent dividend growth calculation as ordered in the 2002 Questar General Rate Case.

This is inconsistent with the Commission's order in that case. Using the 75 percent earnings growth and 25 percent dividend growth calculation, as ordered by the Commission, considers the fact that while the model is theoretically about dividends and not earnings, it also reflects that dividend growth is related to earnings growth. Implicit, is the concept that differences between dividend growth and earnings growth rates in the near-term have a greater effect on the cost of equity than any such differentials in the far future. Therefore, in addition to being ordered by the Commission, this weighting scheme is reasonable and has been used as part of my analysis.

3. Regarding her Constant DCF Model Ms. Bulkley stated "it is appropriate to exclude Constant Growth DCF results below a specified threshold at which equity investors would consider such returns to provide an insufficient return increment above long-term debt costs."[19]

company. RMP has zero control of the risk-free-rate, future stock prices, future dividend yield, etc. Each of those items are controlled by the financial markets.

[19] See Rocky Mountain Power, Direct Testimony of Ann E. Bulkley, lines 944-951.

The analysis shows that 7.0 percent was the minimum threshold at which Ms. Bulkley eliminated the results of comparable companies.[20] Although the Division understands the rationale given by Ms. Bulkley, it does not seem like a prudent adjustment to arbitrarily eliminate DCF results below 7.0 percent.

4. Ms. Bulkley's Projected DCF Model analysis in RMP Exhibit AEB-5 includes Value Line projected growth rates for years 2023 - 2025. The two data points projected in Ms. Bulkley's Projected DCF Model are stock price and annualized dividend from a time frame past the 2021 test year. Using these projected analyst estimates undermines a major premise of the DCF models, which is only one assumption or calculation must be made, the appropriate dividend or earnings growth rate. Each point of data is projected which increases the possibility that the results of the model will be inaccurate.

As stated earlier, projected growth rates are not in the public interest and should not be included in the analysis for the ROE of RMP. The Commission should give no weight to these calculations.

5. Ms. Bulkley's CAPM model calculation includes an Equity Risk Premium however the calculated Equity Risk Premium does not appear to be using a generally accepted methodology that has been published and peer reviewed like other financial theories. As I will discuss in detail later, the Equity Risk Premium calculated by Ms. Bulkley over-estimates the market risk premium leading to a higher CAPM cost of equity result

[20] See Rocky Mountain Power, Direct Testimony of Ann E. Bulkley, footnote 74.

for RMP. The Division believes the Commission should use an Equity Risk Premium from established, and well known sources.

6. Ms. Bulkley's CAPM analysis uses projected risk-free-rates. Later, evidence will be provided that shows the error in projecting risk-free-rates and why those projected risk-free-rates should not be considered.

7. In her attachment AEB-7 Risk Premium Analysis, Ms. Bulkley uses the Blue Chip Near-Term Projected Forecast (Q3 2020 – Q3 2021) and Blue Chip Long-Term Projected Forecast (2021-2025) to calculate the ROE for RMP. As stated before, forward-looking interest projections are not in the public interest and should be excluded from the analysis. The primary model point the Commission should use in its measured judgment of ROE is the analysis that uses the current 30-day average of 30-year U.S. Treasury bond yield.

8. In Ms. Bulkley's direct testimony at line 196 she states "[t]o the extent the utility is provided the opportunity to earn its market-based cost of capital, neither customers nor shareholders are disadvantaged."[21]

The Division agrees that models using a market-based cost of capital are appropriate and should be the only models considered. Ms. Bulkley includes in her analysis an ROE calculation using the Expected Earnings (EE) Analysis. As will be shown later in my testimony, the EE is not a market based model. Additionally, there are some

[21] See Direct Testimony of Ann E. Bulkley lines 196 - 197

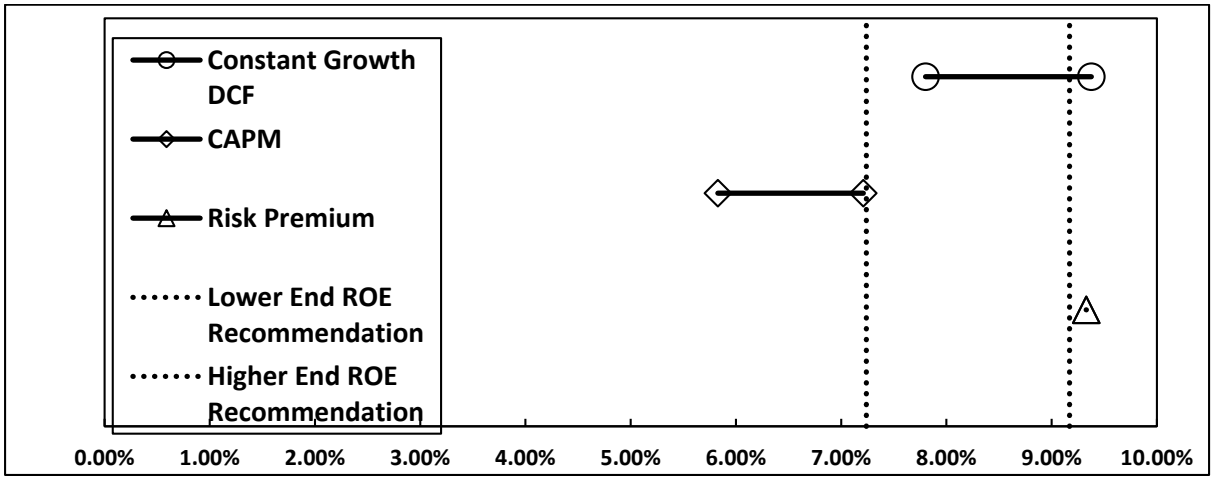
inherent flaws with the model that has caused this method to lose favor in regulatory proceedings. Because of these flaws and the model **not** being market based, the Commission should not include the results of the model in RMP's ROE calculation. As stated by Ms. Bulkley, if the Commission were to include an ROE analysis that was not market based, either shareholders or customers would be disadvantaged, and this is not in the public interest. [22]

Q. DOES MS. BULKLEY'S ANALYSIS SUPPORT A 10.2 PERCENT ROE WHEN ADJUSTED FOR THE ABOVE STATED ISSUES?

A. No. I performed an analysis adjusting for each item the Division was uncomfortable with in Ms. Bulkley's testimony. Using the information provided by Ms. Bulkley and adjusting each calculation results in a ROE range of 5.83 percent to 9.53 percent. Below is a chart similar to what Ms. Bulkley used in her testimony showing the new calculated rates with the suggested adjustments.

[22] Id.

Figure 1: Summary of Cost of Equity Analytical Results



V. CAPITAL STRUCTURE

Q. WHAT IS REQUIRED TO DEVELOP AN OVERALL RATE OF RETURN FOR A PUBLIC UTILITY?

A. The first step in developing an overall rate of return is to select the capital structure ratios. Next, the cost or rate for each capital component, debt and equity, is determined. The overall rate of return is the product of weighting each capital component by its respective cost of capital. This procedure results in RMP's overall rate of return, weighted average cost of capital (WACC), being weighted properly to reflect the amount of capital and cost of capital for both debt and equity.

Q. WHAT CAPITAL STRUCTURE RATIO IS APPROPRIATE TO USE TO DEVELOP RMP'S OVERALL RATE OF RETURN?

A. The Division recommends using the capital structure proposed by RMP witness Ms. Nikki L. Kobliha. The Division recognizes the proposed equity portion is higher than other electric utilities and higher than the ratios followed by RMP in the past. Because

RMP is a vertically integrated electricity utility with increased capital expenses, using a higher equity portion now to mitigate possible financing risks is reasonable.

Q. IS THERE A SET OF REGULATORY AND FINANCIAL PRINCIPLES USED TO DETERMINE THE APPROPRIATE CAPITAL STRUCTURE FOR COST OF CAPITAL PURPOSES?

A. Yes. There is a general set of regulatory and financial principles used in deciding the capital structure issue for cost of capital purposes that are consistent with both regulatory and financial theories:[23]

1. It is generally preferable to use a utility's actual capital structure in developing its rate of return. However, in deciding whether a departure from this general preference is warranted in a particular case, it is appropriate to first look to the issue of whether the utility is a financially independent entity.[24] In determining whether a utility is a financially independent entity or self-financing, it is important to look to whether the utility: (1) has its own bond rating; (2) provides its own debt financing; and (3) debt financing is not guaranteed by a parent company.

2. When a utility issues its own debt that is not guaranteed by the public or private parent and has its own bond rating, regulatory and financial principles indicate to use a utility's own capital structure, unless the utility's capital structure is not representative of the utility's risk profile or where use of the actual capital structure

[23] See generally Roger A. Morin Ph.D., Utilities Cost of Capital, 14-18 (1984).

[24] See generally Fundamentals of Financial Management, 7th Edition, chapters 5, 8, 9, and 12.

would create atypical results. Regulatory and financial principles require the analyst to determine whether the actual capital structure is atypical when compared with the capital structure approved by the Commission for other utilities that operate in the same industry (i.e., water utility, gas distribution utility, telecommunications company, etc.), as well as those of proxy utility companies that operate in the same industry. [25]

3. If a utility does not provide its own financing, public utility commissions often look to another entity. Generally, public utility commissions use the actual capital structure of the entity that does the financing for the regulated utility as long as it results in just and reasonable rates. This generally means using a parent company.

Once the cost of equity for the proxy companies is determined, public utility commissions should determine where to set the utility's return based upon how the utility's risk compares with that of other utilities that operate in the same industry (i.e. water utility, gas distribution utility, etc.). The risk analysis begins with the assumption that the utility generally falls within a broad range of average risk, absent highly unusual circumstances that indicate an inconsistently high or low risk as compared to other utilities that operate in the same industry. Generally, financial risk is the function

[25] For a comprehensive overview of the regulatory process and the issues involved, see Howe, K.M. and Rasmussen, E.F. *Public Utility Economics and Finance*, Englewood Cliffs, N.J.: Prentice-Hall, Inc., (1982).

of the amount of debt in an entity's capital structure used for the cost of capital purposes. When there is more debt, there is more risk everything else being equal.[26]

Q. CAN YOU DISCUSS HOW THE FINANCIAL PRINCIPLES OUTLINED ABOVE APPLY TO RMP?

A. Yes. RMP is wholly owned subsidiary of Berkshire Hathaway Energy Company (BHE). Even though RMP is wholly owned by BHE, RMP has obtained debt independent of the parent company.[27] Using these guiding principles, it would seem reasonable at first glance to use the actual capital structure of RMP in this proceeding. As discussed in Ms. Kobliha's testimony, RMP has a number of capital expenditures that will require new sources of capital. To help fund these capital expenditures RMP is requesting a 46.32 percent debt and 53.67 percent equity capital structure. This is a higher equity position than RMP has been authorized to use in the past. RMP is a vertically integrated electric company and a higher equity portion seems reasonable in order to help fund the additional capital expenditures. The higher equity portion will allow RMP to maintain its favorable credit ratings and allow RMP to reasonably manage its financing costs.

VI. COST OF DEBT

Q. DO YOU HAVE A COMMENT ABOUT THE COST OF DEBT INCLUDED IN THE APPLICATION?

[26] See generally Kahn, Alfred E. The Economics of Regulation Principles and Institutions Volume 1 and Volume II, The MIT Press (1988).

[27] Rocky Mountain Power Direct Testimony of Nikki L. Kobilha Exhibit NLK-1.

A. Yes. The original application provided specific interest rates for the existing debt obligations. Using the information provided,[28] the Division has reviewed the debt and agrees that the cost of debt for RMP should be 4.81 percent.

VII. COST OF COMMON EQUITY

Q. WILL YOU SUMMARIZE THE RETURN ON EQUITY AMOUNT THE DIVISION IS RECOMMENDING FOR THIS CASE?

A. Yes. I have completed and included the calculations for the various models and recommend that the appropriate cost of equity for RMP is 9.25 percent. The Division's recommendation is higher than the calculated range of 7.24 percent to 9.17 and is based on an evaluation of the DCF, CAPM, and Risk Premium Method. The reason for this recommendation will be addressed later in my testimony. The recommended range is just and reasonable to the ratepayers and to RMP and is comparable with the 9.55 average authorized rate of return for electric companies in 2020.[29] The results of the Division's calculations are summarized in DPU Exhibit 2.01 DIR.

VIII. DIVISION ANALYSIS

A. AN OVERVIEW OF COST OF COMMON EQUITY MODELS

Q. WHAT METHODS DID YOU LOOK AT TO ESTIMATE THE CURRENT MARKET COST OF EQUITY FOR RMP?

A. I used similar models to those used in previous rate cases before the Commission and similar to those used in Ms. Bulkley's analysis. I have included a Constant Growth

[28] Direct Testimony of Nikki L. Kobilha for RMP Exhibit NLK-1.

[29] Please see DPU Exhibit 2.07 Past Allowed ROR.

Discounted Cash Flow or DCF model. Within the model I have considered the growth rates from multiple sources. I have included multiple risk premium models (RPM), including the capital asset pricing model (CAPM), and the Bond-Yield-Risk-Premium approach. Later in this section, I will discuss the issues with the Expected Earnings (EE) approach, why it is not considered a market based ROE estimation tool and why this model is falling out of favor with regulatory commissions.

Q. PLEASE BRIEFLY DESCRIBE THE DCF MODEL.

A. The DCF model assumes that the value of ownership in a common stock is based upon the returns the stockholder expects to receive into perpetuity. It incorporates the current dividend and the prospects for growth in that dividend over time. Among other things, the model assumes that the expected price-to-earnings ratio for the company's stock will remain constant at the current level. In the DCF model it is assumed that there exists a growth rate "g" that is constant. That is, this "g" will adequately serve as a surrogate for the growth in dividends for all periods of time in the future. The formula used is:

$$k_e = D_0*(1+g)/P_0 + g$$

Where: k_e is the cost of common equity
D_0 is the current dividend
P_0 is the current stock price
g is the (constant) growth rate

Q. WHAT ARE THE STRENGTHS AND WEAKNESSES OF THE DCF MODELS?

A. Briefly, the strengths of the models are their simplicity and ease of application, particularly in the single-stage version of the model. DCF models are derived directly

from the financial theory that the price of a common stock is equal to the present value of the expected future cash flow to stockholders. Two of the three principal components of the model are directly observable in the market: the dividend and the stock price. The future growth rate is necessarily an estimate, and thus can be controversial. The single-stage model can be faulted because of its assumption that there is a single growth rate, usually derived from relatively short-term growth forecasts that will apply to the company into the indefinite future (theoretically forever). Non-constant and multi-stage DCF models use changing growth rates in future periods and sometimes changing discount rates, but they are increasingly complex. Moreover, without knowledge of future events there is no reason to conclude that multi-stage DCF models are more accurate than single stage models unless there is a known anomaly in the short term.

Q. AS YOU MENTIONED EARLIER, IN THE 2002 QUESTAR GAS GENERAL RATE CASE, THE COMMISSION ADOPTED A 75 PERCENT WEIGHTING ON EARNINGS GROWTH ESTIMATES AND 25 PERCENT WEIGHTING ON A DIVIDEND GROWTH ESTIMATE. DO YOU HAVE ANY COMMENTS ON THIS WEIGHTING?

A. Yes. For a DCF model, this weighting appears reasonable. It gives consideration to the fact that the model is theoretically about dividends and not earnings, but also reflects that dividend growth is related to earnings growth. Also implicit is the concept that differences between dividend growth and earnings growth rates in the near-term have a greater effect on the cost of equity than any such differentials in the long-term. I believe the current weighting is reasonable and should continue to be used.

Q. PLEASE BRIEFLY DESCRIBE THE CAPITAL ASSET PRICING MODEL.

A. The CAPM is a type of risk premium model. CAPM grew out of theoretical work in modern portfolio theory in the 1960s. Modern portfolio theory has shown that diversified portfolios could reduce the variability in the value of those portfolios and that a risk factor called "beta" could be used to estimate the relative variability of a portfolio to the market portfolio. The theory of CAPM is that the cost of equity is equal to the risk free rate plus a market risk premium adjusted by the beta risk factor. The market risk premium is the additional return over the risk free rate that a portfolio of all risky investments, i.e. the "market," would expect to earn. One of the theoretical underpinnings of CAPM is that investors through a diversified portfolio could virtually eliminate risk specific to a particular investment such that if the investor were sufficiently diversified, he would only face the risk of the market, which is also called systematic risk. Beta is a measure of the volatility of an investment's value compared to the market as a whole and will indicate to an investor how a given investment will affect the systematic risk of his portfolio. Under CAPM theory investors are not rewarded for the specific risks of a particular investment because these risks can be diversified away. The only reward the investor receives is the systematic risk, represented by the beta that an investment brings with it to the portfolio.

The calculation of the CAPM cost of equity for a company is straight forward and is based upon readily available information. This model is widely taught in the academic literature and is widely used in industry.[30]

The formula for the CAPM is as follows:

$$k_e = RFR_0 + \beta * (MS\text{-}RFR)$$

Where: k_e is the cost of common equity
RFR_0 is the current risk free rate
β is beta, the risk adjustment factor
(MS-RFR) is the market risk premium which can be decomposed into two factors: The overall market return, MS, and the RFR that is compatible with the way the MS was estimated.

Q. PLEASE BRIEFLY DISCUSS THE STRENGTHS AND WEAKNESSES OF THE CAPITAL ASSET PRICING MODEL.

A. The strengths include a firm theoretical basis for the model, its relative simplicity, and intuitive appeal. The model is widely taught and widely used in corporate America. The downside of the model is that there is little consensus on how each of the factors are developed and how the model is implemented.

[30] Modern portfolio theory and the capital asset pricing model are discussed in detail in texts on corporate finance and investment valuation. See, for example:

Brealey, Richard A., Stewart C Myers and Franklin Allen. (2006). *Principles of Corporate Finance 8th ed*. New York: McGraw-Hill Irwin.

Brigham, Eugene F. and Joel F. Houston. (2007). *Fundamentals of Financial Management 5th ed*. Mason, Ohio: Thomson South-Western.

Damodaran, Aswath. (2002). *Investment Valuation*. New York: John Wiley & Sons, Inc.

Parcell, David C. (1997). *The Cost of Capital – A Practitioners Guide*.

Different analysts will likely choose different risk free rates, which will affect the outcome. Academics sometimes favor using a Treasury Bill rate as the most nearly true risk free security, while practitioners favor longer-term bond rates to match the apparent holding period of the asset. Beta is calculated in various ways using different base periods, market proxies, and other measurement differences, such as the frequency of the observations and even the day of the week the observations are made. Some services offer "adjusted" betas that "correct" the calculated or "raw" beta to account for the apparent tendency of betas to revert to a mean over time. The available services assume that the mean that the betas revert to is the market beta, which is 1.0.

Perhaps the most hotly debated factor is the market risk premium, that is, the premium return investors demand from stocks over the risk free rate. Some practitioners support the use of the arithmetic average of the difference between historical stock market returns (with the Standard & Poor's 500 Index as a proxy) and long-term (approximately 20 years) treasury bond returns since 1926 as popularized by Ibbotson Associates over the last 30 years or so.[31] This approach has been criticized by academics and others on a number of grounds. Some say the historical time period is too long, reaching back to a much different economy than we have today. Others have cited technical problems with the data Ibbotson compiled. One technical problem is referred to as "survivor bias." Survivor bias refers to the fact that the underlying Ibbotson data is composed of companies that were successful, losers are not included. Studies indicate that this bias

[31] Stocks, Bonds, Bills, and Inflation (SBBI), any edition, published annually by Ibbotson Associates.

inflates the Ibbotson-based market risk premiums by about 1 to 2 percentage points.[32] Another issue is the use of arithmetic averages versus geometric averages. Ibbotson Associates, Brealey, Myers, and Allen among others, argue that arithmetic averages produce the appropriate unbiased estimates of returns. The use of arithmetic averages significantly overstates the actual returns an investor would have actually received over a long historical period of time, a time period in which the geometric average accurately reflects the actual experiences of investors. For this reason and others, some experts advocate geometric returns.[33] In short, there is great dispute about how the market risk premium should be estimated. For my analysis, I have used the Duff and Phelps data because it is readily available and widely used.

Empirical studies of stock returns have turned up anomalies that have suggested flaws in the CAPM. In order to correct for these anomalies (and save the basic theoretical construction) additional factors have been specified for the model such as the Fama-French five-factor model or add-ons to the model such as adjustments for size or industry. None of these adjustments have avoided controversy. The practical implementation of the CAPM has resulted in controversy and disagreement. Despite these problems the CAPM is widely used and has an established theoretical basis. The

[32] Brigham, Eugene F. and Joel F. Houston. (2007). Fundamentals of Financial Management 5th ed. Mason, Ohio: Thomson South-Western. p. 272.

[33] For a discussion of geometric versus arithmetic averages, see Damodaran Aswath. (2002). Investment Valuation. New York: John Wiley & Sons, Inc. pp. 161-162 and PPC's Guide to Business Valuations, Volume 1, paragraph 502.8, Practitioners Publishing Company, Fort Worth Texas, February 2006.

fact of its widespread use necessitates that an analyst at least consider the CAPM in evaluating a cost of equity problem.

Q. PLEASE BRIEFLY DESCRIBE THE COMPARABLE EARNINGS MODEL.

A. The CE Model is the oldest of ROE methods, is simple and straightforward, but has generally fallen out of use in the United States.[34] The basic premise of the CE approach is that the model uses the return earned on book equity investment by enterprises of comparable risks as the measure of fair return. The CE approach stems from a particular interpretation of the *Hope* language that states returns are to be defined as book rates of return on equity of other comparable firms. Book return on common equity is computed by dividing the earnings available to common shareholders by the average book common equity. ROE should be measured using "normalized" earnings, that is, earnings before extraordinary items and unusual charges. To implement the approach, a group of companies comparable in risk to a specified utility is defined, the book return on equity is computed for each company and the allowed return is set equal to the average return on book value for the sample. The reference group of companies is usually made up of unregulated industrial companies of similar risk.[35]

[34] National Association of Regulatory Commissioners: A Cost of Capital and Capital Markets Primer for Utility Regulators April 2020, page 18.

[35] Roger A. Morin, *New Regulatory Finance* 381 (Public Utilities Reports, Inc. 2006) (Morin) at 381 emphasis added.

The rationale of the method is that regulation is a duplicate of competition. The profitability of unregulated firms is set by the free forces of competition. In the long run, the free entry of competitors would limit the profits earned by the unregulated companies, and conversely, unprofitable ventures and product lines would be abandoned by the unregulated companies. In other words, the free entry and exit of competitors should ensure that the profits earned by non-regulated firms are normal in the economic sense of the term. Aggregating book rates of return over a large number of comparable risk unregulated companies would even out any abnormal short-run profit aberrations, while averaging over time would dampen any cyclical aberrations. Thus, by averaging the book profitability of a large number of unregulated companies over time, an appropriate measure of the fair return on equity for a public utility is obtained.[36]

Q. PLEASE BRIEFLY DISCUSS THE STRENGTHS AND WEAKNESSES OF THE COMPARATIVE EARNINGS MODEL.

A. One of the positives of the CE Model is that it requires two inputs: recently reported earnings per share from the income statement and recently reported book value of common equity per share from the balance sheet. Some additional positives are that the method is easily understood, and is firmly anchored in regulatory tradition. Because the model aggregates book rates of return over a large number of comparable risk unregulated companies, it avoids the problem of overstating or understating investor return requirements when prices and book values are materially different from unity.

[36] Id, at 381.

583 The major drawback of the CE approach is that the method is not market-based since
584 the calculation relies only on historical accounting data from financial statements, this
585 approach does not technically measure the cost of equity because no market
586 information is utilized. Dr. Morin explains this issue when he states:

587 > [m]ore simply, the CE standard ignores capital markets. If interest rates
588 > go up 2 percent for example, investor requirements and the cost of equity
589 > should increase commensurably, but if regulation is based on accounting
590 > returns, no immediate change in equity costs results. Investors capitalize
591 > expected future cash flows and not current earnings, and what was earned
592 > on book value is not directly related to current market rates.[37]

593 When regulated utilities are utilized in the proxy group the problem of circularity
594 surfaces. The market return on equity for regulated firms is determined by competitive
595 forces, unlike the book return on equity which instead reflects past actions of regulatory
596 commissions. It would indeed be circular to set a fair return based solely on the past
597 actions of other regulators. But to the extent that regulators set the allowed rate of
598 return based on market-based methodologies, rather than accounting-based methods or
599 the allowed returns of other regulators, the circularity problem is mitigated.[38]

600 Other issues with the CE discussed by Dr. Morin include:

601 > [W]hen the utility's current book rate of return is compared to that of
602 > firms of comparable risk, it is assumed that there is a fundamental
603 > theoretical relationship between accounting returns and risk. But no such
604 > relationship exists in financial theory. The risk-return tradeoff found in
605 > financial theory is expressed in terms of market values rather than in terms

[37] Roger A. Morin, *New Regulatory Finance* 393 (Public Utilities Reports, Inc. 2006) (Morin) at 393

[38] Id. at 125

> of accounting values. Only if long time periods are examined and broad aggregates are used can an empirical relationship between risk and accounting return be found.

Dr. Morin continues:

> Another blemish of the Comparable Earnings method is that comparisons of book rates of return among companies are computationally misleading because of differences among companies in their accounting procedures. Despite the umbrella of generally acceptable accounting principles, areas of difference include the treatment of inventory valuation, depreciation, investment tax credits, deferred taxes, and extraordinary items. The lack of accounting homogeneity is exacerbated by the necessity of studying nonregulated companies, which are likely to exhibit greater accounting differences.[39]

Q. YOU JUST DISCUSSED CHALLENGES WITH A COMPARATIVE EARNINGS MODEL BUT DIDN'T MS. BULKLEY DO AN EXPECTED EARNINGS ANALYSIS? ARE THERE SIMILARITIES BETWEEN A COMPARATIVE EARNINGS MODEL AND AN EXPECTED EARNINGS ANALYSIS?

A. Yes. Ms. Bulkley performed an EE analysis. The EE method shares some similarities to the CE method, but its primary distinguishing characteristic is that it is forward-looking. The EE methodology provides an accounting-based approach that uses investment analysts estimates of return (net earnings) on book value (the equity portion of a company's overall capital, excluding long-term debt.) Thus, the two data components needed to implement the EE methodology are: 1) a measure of expected earnings (or earnings per share); and 2) book value of equity (or book value per share). Due to its forward-looking nature, the EE method does not suffer from circularity concerns.

[39] Id, at 393.

Because there are similarities between the EE and CE method many of the same challenges discussed with the CE model would also be applicable in an EE analysis. The biggest concern is that the method is not market-based and instead relies on an accounting-based approach. As previously quoted by Dr. Morin, this approach would "ignore the capital markets" just like the CE method.

Q. DO YOU BELIEVE IT IS APPROPRIATE TO USE THE EXPECTED EARNINGS MODEL FOR DETERMING THE COST OF CAPITAL? CAN YOU EXPLAIN THE REASONS WHY?

A. No. The first reason is that an EE model is not market-based. When determining ROE for RMP the Commission is establishing a utility's ROE to equal the estimated return investors would require in order to purchase stock in the utility at its current market price. As discussed previously, in *Hope,* the Supreme Court explained that "the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks." In order to determine this, parties must analyze the returns that are earned on investments in other enterprises having corresponding risks, but investors cannot invest in an enterprise at book value and must instead pay the prevailing market price for an enterprise's equity. As a result, the expected return on a utility's book value does not reflect "returns on investments in other enterprises" because book value does not reflect the value of any investment that is available to an investor in the market, outside of the unlikely situation in which market value and book value are exactly equal.

The second reason is that an EE model requires only two data points to calculate. Although admittedly this does simplify the calculation for each of the parties involved, unfortunately, the simplicity of the calculation is a result of the model not reflecting a utility's cost of equity. The Federal Energy Regulatory Commission (FERC) stated the following regarding an EE model:

> While it may be true that the Expected Earnings model does not involve the same complexities as the market-based approaches, we find that this is because it does not reflect a utility's cost of equity. It is simpler because it does not consider the market price that an investor must pay to make its investment and other factors such as projected growth rates for the subject utility. Factors such as these—in particular the market price that an investor must pay for an investment, which is the basis for determining the return on that investment—are critical to determining a utility's cost of equity. While it may be simpler to use a model that does not consider such factors, doing so renders that model unable to effectively estimate the rate of return that investors require to invest in the market-priced common equity capital of a utility, which is the utility's cost of equity capital. We find that it is not appropriate to use a model that does not accurately measure the "return to the equity owner" as required by *Hope* merely because it may be simpler to administer. We are cognizant of the administrative burden that is placed on parties to evaluate models that are used in analyzing ROEs, but the mere simplicity of one model as compared to others does not justify using that model if it does not assist us in ensuring that returns to equity owners are just and reasonable.[40]

Because the EE model is not market-based and does not reflect a utility's cost of equity the Commission should exclude any analysis that uses an EE model.

Q. HAS FERC SAID MORE ABOUT EE MODELS?

A. Yes. In FERC's Opinion 569 quoted above, FERC dealt with the appropriate ROE for companies and the methodologies FERC would consider when setting an ROE for

[40] Federal Energy Regulatory Commission Opinion NO. 569 Order on Briefs, Rehearing and Initial Decision, November 21, 2019 paragraph 204.

utilities. A considerable part of the order issued by FERC dealt with an EE method. Quoted below are some pertinent statements from FERC regarding an EE method in determining a fair ROE for a regulated utility.

> We find that the record does not support departing from our traditional use of market-based approaches to determine base ROE. Under the market-based approach, the Commission sets a utility's ROE to equal the estimated return that investors would require in order to purchase stock in the utility at its current market price. In *Hope*, the Supreme Court explained that "the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks. In order to determine this, we must analyze the returns that are earned on "investments in other enterprises having corresponding risks," but investors cannot invest in an enterprise at book value and must instead pay the prevailing market price for an enterprise's equity. As a result, the expected return on a utility's book value does not reflect "returns on investments in other enterprises" because book value does not reflect the value of any investment that is available to an investor in the market, outside of the unlikely situation in which market value and book value are exactly equal. Accordingly, we find that relying on the Expected Earnings model would not satisfy the requirements of *Hope*. [41]

The FERC Commission continued to explain its position regarding an EE methodology stating:

> The return on book value is also not indicative of what return an investor requires to invest in the utility's equity or what return an investor receives on the equity. Because an investor cannot purchase a utility's common stock at book value and must instead pay the prevailing market price for common equity, the utility's expected earned return on book value is indicative of neither what an investor can expect to earn on an investment in the utility's common stock nor what return an investor requires to invest in the utility's common stock. Accordingly, return on book value does not reflect 'the return to the equity owner' that we must ensure is 'commensurate with returns on investments in other enterprises'; therefore

[41] Id.

> we find that this model is not useful in ensuring that the standards of *Hope* are satisfied. [42]

Finally the FERC concluded:

> The return on book value is also not indicative of what return an investor requires to invest in the utility's equity or what return an investor receives on the equity. Because an investor cannot purchase a utility's common stock at book value and must instead pay the prevailing market price for common equity, the utility's expected earned return on book value is indicative of neither what an investor can expect to earn on an investment in the utility's common stock nor what return an investor requires to invest in the utility's common stock. Accordingly, return on book value does not reflect 'the return to the equity owner' that we must ensure is 'commensurate with returns on investments in other enterprises'; therefore we find that this model is not useful in ensuring that the standards of *Hope* are satisfied.[43]

And that:

> [T]he question before the Commission is whether to adopt the proposal in the Briefing Order to directly use the results of the Expected Earnings model in the ROE estimate calculations that are the foundation of our ROE analysis…We find that stronger evidence is required to support a decision to include the Expected Earnings model as a direct input in our ROE methodology than is required to merely use it as corroborative evidence for placing an ROE within the zone of reasonableness. We have directed the parties in these proceedings to address the Briefing Order's proposal to use the Expected Earnings model as a direct input in our ROE methodology and, in light of the evidence that they have provided, we find that there is not sufficient support to use the Expected Earnings model as a direct input in our ROE methodology.[44]

On May 21, 2020, FERC issued an Order on Rehearing of Opinion No. 569-A. In that order FERC "denied the requests for rehearing of [FERC]'s decision to exclude the

[42] Id.

[43] Id.

[44] Federal Energy Regulatory Commission Opinion NO. 569 Order on Briefs, Rehearing and Initial Decision, November 21, 2019 paragraph 226.

Expected Earnings model from its base ROE analysis."[45] FERC shared that "that the requests for rehearing largely repeat arguments parties previously made and which [FERC] addressed in Opinion No. 569. Nothing in the rehearing requests persuades us to alter our decision here."[46]

The Commission should exclude the use of an EE analysis similar to what the FERC has done with its ROE calculations.

B. COMPARABLE (PROXY) COMPANIES

Q. WHAT ARE THE "COMPARABLE COMPANIES" YOU REFERRED TO AND HOW WERE THEY CHOSEN?

A. One of the first steps in the estimate of cost of equity is the selection of publicly traded "comparable," or "proxy" companies. These proxy companies' market returns and characteristics would be studied in order to infer from them what the appropriate cost of equity should be for RMP. The selection and use of comparable companies is obviously critical since RMP itself is not an independent, publicly traded company. Even if RMP were publicly traded it would be advisable to compare it with closely related companies in its industry.

[45] Federal Energy Regulatory Commission Opinion NO. 569-A Order on Rehearing, May 21, 2020 paragraph 125.

[46] Id.

The Company's witness, Ms. Bulkley, chose twenty-four companies as cited in her testimony.[47] The proxy companies selected by Ms. Bulkley seem reasonable and the same companies were used by the Division in its analysis.

C. APPLICATION OF COST OF EQUITY MODELS

1. DCF Models

Q. PLEASE DESCRIBE HOW YOU DEVELOPED THE DCF MODELS.

A. First, I calculated the current dividend yield for each of the comparable companies. The dividend was based upon information provided by Value Line. I used a 30-trading day average closing price from July 1, 2020 to July 31, 2020.[48] The 30-trading day average closing price was used to smooth out random fluctuations that might exist in the stock price data. The historical price information was obtained from Yahoo! Finance. Next, I took earnings and dividend growth rates from the latest Value Line reports for each comparable company as well as the latest updates on Value Line's web site accessed July 16, 2020. This information was combined with the consensus earnings growth estimates reported by Zack's, Yahoo, and Value Line.

Second, I considered several different growth rate estimates for the DCF models. First I calculated growth rates based upon a weighted-average method by applying a 75 percent weight to the average earnings growth rate from Value Line, Zack's, and Yahoo!, and a 25 percent weight to the dividend growth rate (from Value Line) in compliance with the

[47] Direct Testimony of Anne E. Bulkley Lines 273 – 318.

[48] Casey J. Coleman Direct Testimony Exhibit 2.03 DIR.

Commission's decision in the 2002 Questar Gas General Rate Case. DPU Exhibit 2.03 DIR provides the calculation of the DCF model using the Value Line earnings and dividend growth rates and the 30-day average stock price. This calculation results in an estimated cost of capital range for all the proxy group companies of 3.27 percent to 14.79 percent with an average of all the proxy group companies at 9.17 percent.

DPU Exhibit 2.03 DIR provides the same calculation of the DCF model using the average of Zacks, Yahoo, and Value Line reported earnings growth rates and the 30-day average stock price. The DCF model using the 30-day average stock price and the average earnings and dividend growth rates calculates an estimated cost of capital range for the proxy group of companies of 5.55 percent to 11.42 percent with an average of all the proxy group of companies at 8.91 percent. The results from the DCF models along with the other models are summarized on DPU Exhibit 2.01 DIR.

2. CAPM Results

Q. HOW DID YOU DEVELOP YOUR CAPM MODELS?

A. I looked at the CAPM model using different risk free rates, time periods, betas, and market risk premiums. I did this to look at how the variable factors affect the outcome of the CAPM estimate. As stated earlier, there is no consensus on precisely how the components of the CAPM should be estimated.

Q. PLEASE DESCRIBE THE MARKET RISK PREMIUM YOU USED.

A. The primary source of the risk premiums used was from Duff and Phelps Recommended U.S. Equity Risk Premium (ERP) and Corresponding Risk-free Rate

(R_1); The ERP was updated March 27, 2020, and the (R_1) was updated June 30, 2020. The current guidance was for a normalized 20-year U.S. Treasury yield (R_1) of 2.50 percent, with a recommend ERP of 6.00 percent.

Q. WHAT BETA ESTIMATE DID YOU USE?

A. I have calculated the CAPM using the beta from Value Line and the average beta as reported by Zacks, Yahoo! Finance, and Ned Davis Research. The Value Line beta is adjusted to converge toward 1.0 whereas the other betas are not adjusted. The Value Line formula is (adj beta) = .66*(raw beta) + .34. The individual beta estimates for each company can be seen in DPU Exhibit 2.04 DIR. Using each of these estimates, the mean beta is 0.45.

Q. AS PART OF YOUR CAPM ANALYSIS YOU USE A MARKET RISK PREMIUM CALCULATED BY DR. ASWATH DAMODARAN. CAN YOU EXPLAIN THE USE OF THIS MARKET RISK PREMIUM?

A. Yes. Dr. Damodaran is a Professor of Finance at the Stern School of Business at New York University. His research interests are in valuation, portfolio management, and applied corporate finance. His papers have been published in the Journal of Financial and Quantitative Analysis, the Journal of Finance, the Journal of Financial Economics, and the Review of Financial Studies. He has written four books on equity valuation (*Damodaran on Valuation*, *Investment Valuation, The Dark Side of Valuation*, *The Little Book of Valuation*), and two on corporate finance: (*Corporate Finance: Theory and Practice*, *Applied Corporate Finance: A User's Manual*).

Dr. Damodoran has calculated the average historical equity risk premium for stocks minus the U. S. Treasury Bonds at 5.43 percent for a trailing 12-month period with adjusted payout or 5.10 percent trailing 12-month cash yield.[49]

Q. WHAT WERE THE RESULTS FOR YOUR CAPM CALCULATION?

A. As seen in DPU Exhibit 2.05 DIR, I calculated a variety of different returns. First I used the Duff and Phelps (R_1) of 2.50 percent and ERP of 6.00 percent. Following the CAPM inputs as described earlier, I used a number of different Beta estimates to determine a return on equity for RMP. The first calculation was a return on equity using the average beta for all analysts, then the average beta for the specific calculated betas for Value Line, Zacks, Yahoo Finance, and Ned Davis. Using this procedure, I calculated a range of returns from 5.09 percent to 5.90 percent and an average of 5.33 percent.

The same methodology was used replacing the Duff and Phelps ERP with those calculated by Dr. Damodaran. The results of this effort are a range of returns starting at 4.84 percent and going to 5.58 percent. The average of all rates resulting from my CAPM analysis is 5.06 percent.

Q. YOUR CALCULATION OF THE CAPM IS SIGNIFICANTLY DIFFERENT FROM THE CALCULATION USED BY THE COMPANY. CAN YOU EXPLAIN THE DIFFERENCES?

[49] Damodaran, Aswath, Equity Risk Premiums (ERP): Determinants, Estimation and Implications – The 2019 Edition (April 14, 2019). Available at:
SSRN: https://ssrn.com/abstract=3378246 **or** http://dx.doi.org/10.2139/ssrn.3378246.

A. Yes. The major differences in the CAPM model between the Division and Ms. Bulkley are a result of a different Market Risk Premium[50] or Equity Risk Premium (ERP). Ms. Bulkley performs her own risk premium calculation. Her calculation arrives at an estimated required market return of 14.05 percent using S&P Earnings and Estimate Report dated March 31, 2020. The range of the market risk premiums calculated by Ms. Bulkley is 10.85 percent to 12.49 percent. Both of the market risk premiums are significantly higher than the Duff and Phelps or Damodaran estimates. The difference is 485 basis points for the current risk-free-rate and 649 basis points for the long-term projected risk-free rate.

The calculation done by Ms. Bulkley for her ERP is higher than the total return for the market as calculated by Duff and Phelps or Damodaran. A total market return for Duff and Phelps would be 8.50 percent, while the total market return for Dr. Damodaran would be 7.93 percent.

As stated previously, I believe using the calculated risk premiums, as shown in Ms. Bulkley's Direct Testimony RMP Exhibit AEB-6, is unsupported. The analysis done by Ms. Bulkley has not been accepted by the Commission in any other rate case. Additionally, to my knowledge this has not been published in any journal or academic publication that would allow the results to be vetted and reviewed for accuracy. Because of these two facts, the Division believes the Commission should not give any weight to the CAPM analysis done by Ms. Bulkley.

[50] Direct Testimony of Anne E. Bulkley RMP Exhibit AEB-6 CAPM.

Additionally, the bulk of the analysis done by Ms. Bulkley in her CAPM model, uses projected rates for the risk-free rate. The Commission has not used projected rates when determining the appropriate risk-free rate, subsequently, any analysis done by Ms. Bulkley using projected rates should not be considered.

Q. WHY ARE YOU SO STRONGLY OPPOSED TO PROJECTED INTEREST RATES WHEN CALCULATING AN ROE?

A. The current market situation does not support higher interest rates in 2020 and historically analysts have seldom been right when projecting interest rates. Analysts seldom project decreasing interest rates, so the projections are biased to begin with. Additionally, analysts tend to have much more optimistic predictions of the future that seldom happens.

Recently, the Federal Reserve indicated where interest rates might be set over the next couple of years. In an article in the Wall Street Journal dated June 11, 2020, Mr. Jerome Powell is quoted as saying "[w]e're not thinking about raising rates. We're not even thinking about thinking about raising rates."[51] Ms. Bulkley projects rates that are higher than the current rates today. According to Chairman Powell, this would be incorrect.

Additionally, analysts have seldom been accurate when trying to project and determine future interest rates. A quick search into the information available on how accurate

[51] Timiraos, N. (June 11, 2020) Fed Officials Project No Rate Increases Through 2022. *Wall Street Journal* Retrieved from http://online.wsj.com

analysts have been when predicting interest rates shows they are woefully incorrect. In one article, Mr. Eisen states "[y]es, 100 percent of economists were dead wrong about yields."[52] In a report published by the Wall Street Journal Mr. Ip explains that "[e]conomists got the decade all wrong and they are trying to figure out why."[53] As the information shows, economists and analysts have rarely got the future interest rate projections right. If the Commission were to accept projected interest rates, it would begin its framework of analysis with flawed and erroneous data, causing the ROE analysis to be flawed and erroneous. Because of this fact, the Commission should not use projected interest rates as recommended by Ms. Bulkley.

Q. WOULD THE MAJORITY OF PUBLISHED METHODS TO CALCULATE AN EQUITY RISK PREMIUM SUPPORT MS. BULKLEY'S CALCULATED RISK PREMIUM?

A. No. In the financial literature, there are a variety of different ways to calculate the ERP or market risk premium. When looking at these studies, a general consensus is that the appropriate ERP would be in the range of three percent to six percent depending on which risk-free-rate was used by analysts. Below is a list of opinions of an appropriate ERP.

[52] Ben Eisen, "Yes, 100% of economists were dead wrong about yields" *Market Watch*, October 22, 2014. **https://www.marketwatch.com/story/yes-100-of-economists-were-dead-wrong-about-yields-2014-10-21**

[53] Ip, G. (December 14, 2019) Economists Got the Decade All Wrong. They're Trying to Figure Out Why. *Wall Street Journal* Retrieved from **https://www.wsj.com/articles/economists-got-the-decade-all-wrong-theyre-trying-to-figure-out-why-11576346400?mod=searchresults&page=1&pos=3**

Principles of Corporate Finance, 11th ed., takes no official position on the exact ERP. But the authors believe that a range of 5 percent to 8 percent premium over T-Bills is reasonable for the United States (equivalent to a premium over long-term government bonds of approximately 3.5 percent to 6.5 percent).[54]

Valuation: Measuring and Managing the Value of Companies, 6th ed., note that "Although many in the finance profession disagree about how to measure the market risk premium, we believe a range around 5 percent is appropriate. Historical estimates found in most textbooks (and locked in the minds of many),which often report numbers near 8 percent, are too high for valuation purposes, because they compare the market risk premium versus Treasury bills (very short-term bonds) and are biased by the historical strength of the U.S. market.[55]

Statista an investment data portal states: "[t]he average market risk premium in the United States remained at 5.6 percent in 2020. This premium has hovered between 5.3 and 5.7 percent since 2011.[56]

Q. WHAT CONCLUSION CAN BE GAINED FROM REVIEWING THESE EQUITY RISK PREMIUM MODELS?

A. Even though there are a number of methods used in the financial literature to determine an ERP, the methods of the individual authors conclude the appropriate ERP is close to 5 percent. That is important for this case because Ms. Bulkley's ERP calculation ranges from 10.85 percent to 12.49 percent. Ms. Bulkley's ERP calculation is 217 percent to 250 percent higher than the general consensus of finance professionals. Ms. Bulkley's ERP calculation does not appear to be reasonable or in the public interest.

[54]Richard A Brealey, Stewart C. Meyers, and Franklin Allen, *Principles of Corporate Finance,* 11th ed., (New York: McGraw-Hill/Irwin, 2014), pg: 167.

[55] McKinsey & Company Inc., Tim Koller, Marc Goedhart, and David Wessels, op. cit, pg.: 292.

[56] See https://www.statista.com/statistics/664840/average-market-risk-premium-usa/.

3. Risk Premium Method

Q. CAN YOU PLEASE DESCRIBE THE RISK PREMIUM MODEL USED BY THE DIVISION?

A. We can estimate the value of a company's equity by adding its risk premium to the yield-to-maturity on the company's long-term debt. The equity risk premium is essentially the return that stocks are expected to receive in excess of the risk-free interest rate. The normal historical equity risk premium for all equities has been just over 6 percent. In general, an equity's risk premium will be between 5 percent and 7 percent.[57] The RPM Equation states that the required return on an equity equals the yield of the company's long-term debt plus the equity's risk premium.

As DPU Exhibit 2.06 shows, the Division used the ERP and (R_1) as calculated by Duff and Phelps as a baseline for the total market risk premium of 8.50 percent. Because RMP has a bond rating of A, the DPU looked at both Moody's Aaa and Baa Bond Yield to establish a range for an A-rated bond. The Aaa Bond Yield was 2.44 percent and the Baa Bond Yield was 3.46 percent. Each of these bond yields were subtracted from the total market return of 8.50 percent to Estimate the Market Risk Premium of 6.06 percent to 5.04 percent for RMP. To determine the cost of equity, I added the appropriate premium to RMP's current long-term borrowing Rate of 3.30 percent to arrive at a cost of equity of 8.34 to 9.36 percent.

[57] See **https://courses.lumenlearning.com/boundless-finance/chapter/approaches-to-calculating-the-cost-of-capital/**.

Exhibit 2.06 includes the same calculation but uses the ERP identified by Dr. Damodaran of 5.43 percent. Following the same construct as described above, the Division calculated a return on equity range of 8.75 percent to 9.77 percent. Because no reports showed the rate for an A rated bond similar to RMP, the mid-point between the two rates was used to calculate the Bond Yield Premium of 9.06 percent.

Q. WHAT ARE THE DRAWBACKS OF USING THE RPM APPROACH?

A. Estimating the value of an equity using the RPM approach has its drawbacks. To utilize this method, a company has to have publicly traded debt. Another drawback is that it does not produce as accurate an estimate as the CAPM or DCF analysis. Finally, equity risk premium estimates can be highly inaccurate, and vary wildly depending on which model is used. It can be very difficult to get an accurate estimate of the risk premium on an equity, having a duration of roughly 50 years, using a risk-free rate of such short duration as a 10-year Treasury Bond.

Q. WHAT ARE THE RESULTS OF THE DIVISION'S CALCULATION USING THE BOND YIELD RISK APPROACH?

A. This approach estimated higher cost of equity rates than the CAPM model but lower than the DCF model. This result is not entirely surprising because the CAPM model, with the lower beta values and risk free rates, generally calculates the lowest cost of equity. Because the RPM approach is looking at corporate bond rates, the model will calculate a higher cost of equity than the CAPM model.

4. Risk Premium Results

Q. WHAT DO THE RISK PREMIUM RESULTS SUGGEST TO YOU?

A. The risk premium results are low compared to the other models used and to recent commission orders. I believe the CAPM model is returning low values due to the favorable low interest rate environment caused by the current monetary policy, a situation faced by all investors in the marketplace.

Q. YOU DID NOT INCLUDE ANY ADJUSTMENTS TO YOUR CAPM CALCULATION. CAN YOU EXPLAIN WHY?

A. Yes. The main reason is for simplicity. My analysis provides the return on equity following basic CAPM theory. There are a number of ways to adjust the CAPM, (i.e., Empirical CAPM, adjustments for size premiums, etc.). However, to provide the greatest level of clarity for the Commission to consider, no adjustments to CAPM were made.

Another reason I did not include any adjustments is that each approach is filled with its own set of issues and controversies. The existence of the small cap effect is disputed by some researchers, such as Dr. John Kania.[58] Others, like Brigham and Houston, suggest that the effect might be less than one finds in Ibbotson Associates' publications.[59]

[58] Kania, John J. "The small firm risk premium remains largely a myth," Shannon Pratt's Business Valuation Update, Vol. 9, No. 11, November 2003. The essence of Dr. Kania's argument is that "smallness" is incorrectly specified as market capitalization, i.e. the market value of a company's stock. When other measures of size such as revenues or total assets are used, the size effect vanishes.

[59] Brigham, Eugene F. and Joel F. Houston, Fundamentals of Financial Management Concise 3rd Ed., Harcourt College Publishers, Orlando FL, 2002. Brigham and Houston conclude (p. 491) "In general, the

Q. YOU DO NOT BELIEVE ANY ADJUSTMENTS ARE NECESSARY TO THE CAPM CALCULATION, YET MS. BULKLEY INCLUDES AN EMPIRICAL CAPM CALCULATION. LET'S SUPPOSE YOU DID FEEL ADJUSTMENTS TO THE CAPM MODEL WERE WARRANTED. WOULD YOU THEN ACCEPT MS. BULKLEY'S ANALYSIS REGARDING THE EMPIRICAL CAPM?

A. Simply, no. Ms. Bulkley uses an ERP that she calculated. As described above, the Division does not agree with this approach. The Empirical CAPM used returns that were based on the CAPM formula followed by Ms. Bulkley. If the ERP results are flawed for the CAPM calculation, then the same ERP results will be flawed for the Empirical CAPM results. Due to this fundamental flaw, the Division cannot accept the Empirical CAPM rates recommended by Ms. Bulkley.

IX. RATE CASE HISTORY IN OTHER STATES

Q. WHAT HAS BEEN THE GENERAL TREND IN OTHER STATES REGARDING THE ALLOWED RATE OF RETURN FOR REGULATED ELECTRIC UTILITIES?

A. For years, the Division has testified the fact that allowed rates of return have been declining.[60] As presented earlier in my testimony, research done by RRA clearly shows a declining trend for average authorized ROE since 2005.

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cost of equity appears to be one or two percentage points higher for small firms (those with market values less than $20 million) than for large NYSE firms with similar risk characteristics."

[60] See Douglas D. Wheelwright Surrebuttal Testimony Docket No. 13-057-05 Lines 92 – 98.

Q. WHAT IS THE CURRENT APPROVED RATE OF RETURN BY OTHER STATE COMMISSIONS FOR EACH OF THE REGULATED UTILITIES UNDER THE PACIFICORP OWNERSHIP?

A. As provided by RMP61 here is the following information on allowed rate of return.

State	AROR
California	10.60%
Wyoming	9.50%
Idaho	9.90%
Oregon	9.80%
Washington	9.50%

In the states of Oregon, and Wyoming, RMP is in the process of adjusting the allowed rate of return (AROR) for each state. Washington just recently agreed to keep the rates for RMP in its state at 9.50 percent.62 Excluding California, which has a different regulatory construct than the rest of the states, AROR for each state has not been adjusted for at least five years. 63 Because of this fact, the AROR, in each state has not followed the observed lowering trend in rates over the last few years.

Q. CAN YOU EXPLAIN THE IMPLICATIONS OF THE 9.50 PERCENT AROR IN THE WASHINGTON STATE STIPULATION?

A. Yes. Even though the ROE for PacifiCorp in the State of Washington was a stipulated amount, a couple inferences can be made. First, the 9.50 percent was not an increase

61 See Rocky Mountain Power's response to Office of Consumer Services Data Request No. 2.28.

62 Washington Utilities and Transportation Commission, Settlement Stipulation, Docket No. UE-191024, July 20, 2020, page 5.

63 See Rocky Mountain Power's response to Office of Consumer Services Data Request No. 2.28.

over the existing rate. Despite many of the current unknowns in the market, i.e. impacts from COVID-19, changing loads, interest rate changes, etc. the company, regulators, and other interested parties did not feel it was in the public interest to raise the ROE. Second, despite the 9.50 ROE being the lowest ROE for any PacifiCorp subsidiary, the Company agreed to the terms outlined in the stipulation.

This stipulation goes contrary to the arguments being made by Ms. Bulkley that RMP is riskier and therefore needs a premium to adequately compensate investors for the additional risk of investing in RMP.

Q. WHY DO YOU BELIEVE THE COMMISSION SHOULD AUTHORIZE A 9.25 PERCENT RETURN ON EQUITY FOR RMP WHEN IT RECENTLY AWARDED DOMINION ENERGY UTAH A 9.50 PERCENT RETURN ON EQUITY?

A. I was the Division's witness for the 2019 Dominion Energy case and recommended a 9.25 percent cost of equity in that case as well. [64] The Division believes that the Commission may have been implicitly invoking the principle of gradualism in the Dominion Energy Utah case.[65]

Q. PLEASE DESCRIBE THE REGULATORY PRINCIPLE OF GRADUALISM?

A. In December 2013, the Washington Commission specifically invoked the regulatory principle of gradualism in awarding PacifiCorp a 9.50 percent authorized return on

[64] See Casey J. Coleman Direct Testimony Docket No. 19-057-02 Line 50.

[65] See Utah Public Service Commission Order, Docket No. 19-057-02, February 25, 2020, page 1.

equity.[66] The implication is that absent the application of that principle, the authorized return would have been lower; perhaps in the 9.00 to 9.25 percent range advocated by non-Company witnesses. Charles F. Phillips, Jr. discusses gradualism in the relevant context of rate of return.[67] Writing in the early 1990s, Mr. Phillips quotes from a Virginia commission decision that describes the principle of gradually adjusting rates in the face of changing market conditions.[68] Mr. Phillips concludes that "[g]iven volatile markets, combined with a trend toward greater reliance upon market forces, the issue of gradualism cannot be ignored."

Q. HOW WOULD THE PRINCIPLE OF GRADUALISM APPLY IN THIS CASE?

A. The Division's recommendation of 9.25 percent is in part based on the principle of gradualism. It is higher than the reasonable range calculated by the Division and is higher than many publication's calculations of the broader market return expectations that are based on a greater risk than RMP. However, the Division believes that reducing RMP's authorized ROE from 9.80 to a mid-point rate within the calculated

[66] Washington Utilities and Transportation Commission, op.cit.; for example see page 27, paragraph 70.

[67] Charles F. Phillips, Jr., *The Regulation of Public Utilities* Arlington, Virginia: Public Utilities Reports, Inc., 1993, pp. 408-409.

[68] Mr. Phillips quoted the Virginia commission which said "The commission has no control over a rapidly changing economy or volatile interest rates. We do, however, have the power to regulate authorized returns on equity. The commission feels that stability in the cost of equity is in the interest of utilities, ratepayers and the economic environment of the commonwealth. When interest rates soared and the prime rate exceeded 20%, we did not allow exorbitant authorized returns which would have exacerbated the situation. We allowed returns to gradually increase, recognizing the trends of the day but avoiding extreme reaction. Recently interest rates have plummeted. Our appropriate reaction should not be to cut authorized equity returns drastically, but to once again gradually move in the direction of the trend. Our goal is a fair and stable environment which will allow Virginia's utilities to better plan for the future and continue to provide economical, reliable service." Ibid., page 409.

range of 7.24 percent to 9.17 is a significant adjustment to the allowed rate of return. Instead, reducing RMP's AROR to 9.25 percent is a reasonable move under the principle of gradualism. This avoids the volatility that can happen with extreme adjustments in rates.

Additionally, given the relative length of time since the last general rate case, the Commission should determine an amount that is appropriate with minimal reliance on the principle of gradualism. To the extent gradualism is employed, it should have a defined ending.

X. COMMENTS ON COST OF EQUITY RESULTS

Q. DO YOU HAVE ANY OTHER COMMENTS ABOUT MS. BULKLEY'S TESTIMONY?

A. Yes. As discussed earlier, inherent in the proposed range of rates for RMP, is the belief that the Company has risks greater than a comparable set of companies or for the entire market. Ms. Bulkley uses the following points to try and argue that RMP is a higher risk than a comparable set of companies. Those items are capital expenditures, regulatory risk, and generation ownership. Each point will be discussed in further detail below.

Capital Expenditures

The first thing to point out regarding RMP's capital expenditures is that these expenditures are being voluntarily made by the Company. The Commission has not had any proceedings that required a minimum amount of capital expenditures for RMP. Instead the Commission has allowed projects that RMP has determined to be beneficial

for the Company because of market conditions.

Additionally, capital expenditures become risky if the Company has difficulty in raising capital to finance those capital additions. Generally, investors expect a certain level of equity to be invested into the regulated utility to maintain the company's rate base. While capital expenditures could be a risk (if a company is not able to raise capital to economically finance those capital additions), discontinuing capital expenditures could be just as damaging to a regulated utility.

With the capital costs of a utility at attractive rates, compared to historical rates, a prudent choice for a regulated utility is to continue raising capital when it is relatively inexpensive and invest the proceeds from that capital into long term projects. Because this is a shrewd management choice, as shown in Ms. Bulkley's testimony, a 1.10 capital expenditure ratio compared to the proxy group of companies does not make RMP riskier.[69]

On lines 1234-1236 of Ms. Bulkley's testimony, she discusses a capital tracking mechanism and that RMP does not utilizes a capital tracking mechanism. She then explains that because RMP does not have a tracking mechanism, that makes RMP more risky than a comparable set of regulated utilities. Her data point to support this claim is that 52 percent of the proxy group utilities have such a tracking mechanism. The flip side of that argument is that 48 percent of the proxy group utilities do not have a tracking mechanism. With a 52 percent to 48 percent split between proxy utilities having a

[69] See Direct Testimony of Ann E. Bulkley lines 1228 – 1232.

tracking mechanism or not, there does not seem to be a clear choice by the utilities. Therefore, RMP is not that much riskier than a comparable group of companies, but instead is able to recover its capital expenditures in a similar manner to 48 percent of the proxy utilities.

Regulatory Risk

The DPU agrees with Ms. Bulkley when she illustrates the idea that the regulatory environment is a key component when considering the risks of a company:

> The ratemaking process is premised on the principle that, for investors and companies to commit the capital needed to provide safe and reliable utility service, the subject utility must have the opportunity to recover the return of, and the market-required return on, invested capital.
>
> Regulatory authorities recognize that because utility operations are capital intensive, regulatory decisions should enable the utility to attract capital at reasonable terms; doing so balances the long-term interests of investors and customers. Utilities must finance their operations and require the opportunity to earn a reasonable return on their invested capital to maintain their financial profiles. RMP is no exception. In that respect, the regulatory environment is one of the most important factors considered in both debt and equity investors' risk assessments.[70]

In evaluating the regulatory risk faced by RMP, Ms. Bulkley looks at specific mechanisms used by utilities to construct an image of the regulatory environment in Utah. She argues that RMP is riskier because it does not have many of the mechanisms other utility companies have in her proxy group. Generally, this argument again does not have merit. Looking at the percentages provided in each case, except Fuel and Energy Cost Recovery, the analysis shows numbers grouped very close to 50 percent. For the

[70] See Direct Testimony of Ann E. Bulkley lines 1253 – 1262.

Fuel and Energy Cost Recovery metric Ms. Bulkley shows 90 percent of companies have a cost recovery metric just like RMP. While RMP is neither way above or way below the industry results, it is difficult to draw a conclusion that RMP has a greater regulatory risk and therefore requires a higher ROE. Listed below is a quick summary of the percentages for each category.[71]

- Fuel and Energy Cost Recovery 90%
- Test Year Convention 49%
- Rate Base 49%
- Volumetric Risk 52%
- Capital Cost Recovery 52%

The list of comparable regulatory mechanisms demonstrates that RMP has very similar risks when compared to other utilities.

Q. HOW DOES RRA RATE THE UTAH PUBLIC SERVICE COMMMISSION?

A. On May 19, 2020, the RRA Regulatory Focus published updated information regarding each state and how the RRA rates the regulatory environment for each utility. RRA's evaluations are assigned from an investor perspective and indicate the relative regulatory risk associated with the ownership of securities issued by each jurisdiction's energy utilities. Each evaluation is based upon consideration of the numerous factors affecting the regulatory process including gubernatorial involvement, legislation, and court activity, and may be adjusted as events occur that cause RRA to modify its view of the regulatory risk for a given jurisdiction.

According to RRA, "[a] rating in the average category would imply a relatively balanced

[71] See Direct Testimony of Ann E. Bulkley lines 1307–1339.

approach on the part of the governor, the legislature, the courts, and the commission when it comes to adopting policies that impact investor and consumer interests."[72] In RRA's report, the Commission receives a rating of Average 2.

A June 8, 2020, report published by RRA, discussed the regulatory environment when dealing with credit metrics. The report stated that:

> S&P Global Ratings conducts periodic assessments of each regulatory jurisdiction in the U.S. and Canada where a rated utility operates as a reference when determining a utility's regulatory advantage or regulatory risk. S&P Global Ratings' analysis covers quantitative and qualitative factors, focusing on regulatory stability, tariff-setting procedures and design, financial stability, and regulatory independence and insulation. The presence of utility regulation, no matter where in the spectrum of [S&P Global]'s assessments, strengthens the business risk profile and generally supports utility ratings. [73]

The report claims the regulatory environment in the State of Utah as Highly Credit Supportive.

RMP has not provided any compelling evidence that the regulatory environment in Utah is risky or unfavorable to its utility operations. Instead, the utility benefits from a balanced regulatory approach in Utah. The balanced, or lower risk regulatory environment, does not merit a risk premium to the ROE of RMP.

Generation Ownership

Ms. Bulkley uses the fuel mix of a vertically integrated electric utility and the transition

[72] See S&P Global Market Intelligence RRA Regulatory Focus: State Regulatory Evaluations May 19, 2020.

[73] See S&P Global Ratings Credit Research U.S. and Canadian Utility Regulatory Updates and Insights: June 2020.

in the electric industry from coal-fired plants to renewable resources as part of her basis for increased risk to RMP. The Division agrees that a vertically integrated electric utility could have higher business risk than other regulated utilities. Ms. Bulkley explains "[a]s a result of this higher business risk, integrated electric utilities typically require a higher ROE or percentage of equity in the capital structure than other electric or gas utilities."[74] It is interesting to note that Ms. Bulkley suggests an appropriate step for the Commission to take to mitigate the additional risk would be a "higher ROE **or** a higher percentage of equity in the capital structure". If the Commission were to allow a higher ROE **and** a higher percentage of equity in the capital structure, then the Commission would be over-compensating investors for the risks of RMP being a vertically integrated electric utility. To ensure that this overcompensation for the business risks of a vertically integrated electric utility does not happen, the Commission should not consider a higher ROE for RMP and instead consider the equity portion in the capital structure as the appropriate setting to adjust for these business risks.

RMP could have additional risks as a result of legislation in Oregon, Wyoming, and other states dealing with coal-fired power plants. [75] While there might be costs and challenges inherent in the transition from coal-fired power plants to renewable energy resources, increasing the ROE of the utility is not the appropriate place to deal with those issues. RMP has an integrated resource plan (IRP) where each of the various issues dealing with this transition is being addressed. The IRP is the appropriate venue to deal with these

[74] Direct Testimony of Ms. Ann E. Bulkley lines 1443-1445.

[75] Direct Testimony of Ann E Bulkley lines 1482-1495.

regulatory issues and pressures. Additionally, increasing the ROE to Utah customers, for a decision made in Oregon or Wyoming, is not in the interest of Utah rate payers. If there are additional risks because of those legislative results, customers in Oregon, Wyoming, California, or any of those jurisdictions, should bear those costs or risks—not Utah ratepayers. It is a simple matter, cost responsibility should follow cost causation. The Commission should not increase RMP's ROE because of these items.

Finally, Ms. Bulkley discusses how Utah House Bill (HB) 411, the Community Renewable Energy Act, was signed into law. This bill allowed municipalities and counties in Utah to achieve a net-100 percent renewable electric portfolio by 2030. According to Ms. Bulkley, a community was required to adopt a local resolution by the end of 2019 stating the goal to be net-100 percent renewable by 2030. [76] While this legislation could impact RMP, it is too early to know the direct impact. Additionally, no analysis was done to show the impact to revenues or cash flow by a community adopting a future renewable goal. Because no data or evidence was given to support this as a material issue facing RMP now, the Commission should not determine the risk to RMP as material enough to support a premium to investors to compensate for the potential risk.

Q. DO YOU BELIEVE RMP IS LESS RISKY THAN THE COMPARABLE PROXY GROUP COMPANIES? AND, IF SO, CAN YOU EXPLAIN WHY?

A. Yes. RMP is less risky for a number of reasons. These reasons include being a wholly owned subsidiary of BHE, the ability to pay flexible dividends, and a historically strong

[76] Direct Testimony of Ann E Bulkley lines 1470-1474.

and growing local economy. How each of these reasons lowers the risk to RMP in comparison to the proxy group of companies is discussed below.

Wholly Owned Subsidiary of BHE

In the direct testimony of Ms. Kobliha at lines 255 -275 she discusses how RMP receives a favorable credit rating from Moody's and S&P because RMP is a wholly owned subsidiary of BHE. [77] Additionally, investors know and respect Berkshire Hathaway. Being affiliated with BHE is seen as a positive to investors and credit agencies because of the stability of the parent company.

Both Ms. Bulkley's and Ms. Kobliha's direct testimony explicitly addresses this point. Ms. Kobliha's indicates RMP had issued both 10 year notes and 30 year notes from 2006 to the most recent bond in 2020.[78] Also Figure 17 of Ms. Bulkley's testimony, compares the Authorized Electric Returns for Utah and the U.S.[79] Ms. Bulkley's testimony shows that from 2011 to 2013, the Authorized ROR for RMP was below the average. Despite having a lower ROR, RMP was able to issue bonds and had access to the credit markets for any of its capital expenditures and projects from 2011 until today.

Because RMP did not have a downgrade in its credit ratings, restricted access to the capital markets, or other capital market challenges, the inference is that investors did not require a premium from RMP to offset any risks. Instead, they accepted a lower rate of

[77] Direct Testimony of Ms. Nikki L. Kobliha lines 255 – 275.

[78] Direct Testimony of Ms. Nikki L. Kobliha RMP Exhibit NLK-1.

[79] Direct Testimony of Ms. Ann E. Bulkley line 1382.

return. If a rational investor is accepting a lower rate of return than other comparable investments then the perception in the market is that the company with the lower return, has a lower risk than a comparable company.

Flexible Dividends

Ms. Kobliha also points out the benefit of flexible dividends in her testimony.[80] Because RMP is going to have higher capital expenditures over the next few years, RMP's management is suggesting using retained earnings and debt to finance those capital expenditures. BHE is not going to require RMP to pay any dividends during this period of higher capital expenditures. Every one of the proxy companies selected by Ms. Bulkley pays a dividend. Publicly traded companies generally do not decrease or eliminate the amount of its dividend to investors year-over-year and do all that they reasonably can to avoid lowering a dividend payment. RMP has the flexibility to adjust its dividend payments which is a huge benefit. Management is better able to manage cash flow, capital expenditures, and other expenses by being able to pay a flexible amount of dividend.

Healthy and Growing Economy

Before the pandemic hit the United States, Utah had one of the most vibrant and healthy economies in the United States. Because RMP was in a healthy economy, the prospects for growth are greater than other regulated electric utilities located in declining economies. In a recent article, Forbes magazine noted that "[c]ities that were fast-

[80] Direct Testimony of Ms. Nikki L. Kobliha lines 92 – 108.

growing pre-coronavirus will continue their rise. Denver and Salt Lake City are well-positioned to retake their crown as two of the fastest-rising metro areas in the US."[81]

Q. DOES YOUR ANALYSIS IMPLY THAT RMP DESERVES A PREMIUM COST OF EQUITY COMPARED WITH THE AVERAGE OF COMPARABLE COMPAPNIES?

A. No, there is no such indication. When looking at the rates for Rocky Mountain Power, the appropriate cost of equity would be lower than the average allowed rate of return for other electric utilities because of the lower risks of RMP. There is no factual reason that would push RMP into a premium cost of equity environment.

XI. FAIR RATE OF RETURN

Q. WILL YOU DISCUSS HOW A COST OF EQUITY OF 9.25 PERCENT IS REASONABLE GIVEN YOUR ANALYSIS?

A. Yes. Over numerous pages of my testimony I have provided results from different financial models that attempt to estimate the appropriate cost of equity for RMP. This is what I would term as the "framework" aspect of rate making. Careful consideration has been taken to follow each model and theory as accurately as possible. In this process, inherent warts and flaws will trickle into the theories. No method is perfect and each evaluation provides its own set of results. After extensive analysis, my research comes up with a cost of equity in the range of 7.24 percent to 9.17 percent.

[81] Forbes, Ranked: The 10 US Cities Best Positioned To Recover From Coronavirus (And The 10 Worst), May 12, 2020.

That is a very significant range of rates from each of the different models. My suggested rate of 9.25 percent falls just outside the top end of the calculated ranges.

Rate making, is not a simple process of observing the results calculated by the models and determining the appropriate cost of equity for a utility. A well thought out approach weighing the appropriate shortfalls of each model and the specific risks of the company is necessary to determine an acceptable rate of return. I have attempted to blend the data calculated to determine a fair and reasonable rate that will allow for additional investment capital for RMP while balancing the costs consumers must pay to cover those costs. The reasoning behind my recommendation is as follows.

The financial model that calculated the lowest return on equity was the CAPM. The range of rates varied from 5.06 percent 5.90 percent. Looking at the lower data points calculated using this model makes me a bit uncomfortable using CAPM rates exclusively. It is not surprising that the CAPM analysis calculates the lowest cost of equity for RMP. One of the important inputs in the model is the risk free rate. With interest rates considerably lower than in the past, a model that uses the risk free rate as a major component of the calculation will have a lower result than other models. Because of this weakness, I place some value on the results of CAPM with the understanding that the risk-free rate might be skewing the returns downward.

The average market return using the Bond Yield plus Risk Premium method was a 9.06 percent return on equity. Of all the models, this model is the one that I put the least amount of credibility and weight. It is acceptable as an additional point of reference,

however, with so many variables and assumptions, it is optimistic to feel entirely confident that the model is providing accurate results.

The model I place the most weight on for calculating the return on equity is the DCF model. Because two of the three inputs are easy to calculate from the market, this model has the least number of assumptions and calculations. Also, there are a number of reputable agencies that are calculating growth rates that can be used in the model. My results using the DCF model provided a range of 3.27 percent to 14.79 percent with an average of a 9.17 percent return on equity. The disparity of the range with the DCF is a reflection of calculating the ROE for 24 different companies and each company's different financial position. To minimize the disparity in rates the average of all companies is analyzed and used.

Q. SINCE A ROE OF 9.25 PERCENT IS HIGHER THAN MANY OF YOUR CALCULATIONS, HOW CAN YOU BE COMFORTABLE WITH THAT RECOMMENDATION?

A. There are a number of factors that go into this recommendation. There has been a long standing discussion dealing with the fair rate of return versus the cost of equity for utility companies. Steven G. Kihm argues that "determining a reasonable return on equity is a judgment call, one that reflects the regulator's broad perspective on public policy matters. That requires one to look beyond economic concepts, such as the cost of equity, to find proper returns." [82]

[82] Steven G. Kihm, "The Proper Role of the Cost-of-Equity Concept in Pragmatic Utility Regulation" *The Electricity Journal* Volume 20 Issue 10(2007): 26.

NARUC explained the balancing of interests regulators deal with each day when making ROE decisions. It stated:

> it is typical for regulatory commissions to be confronted with the perpetual challenge of having a record consisting of multiple ROE methodologies from multiple ROE witnesses representing multiple parties. Amid the plethora of evidence before it, the regulatory commission is charged with considering and weighing all the evidence and determining a specific authorized ROE for use in developing tariffs. The 'weighing' part is challenging and can be different in each commissioner's reasoning, but the task at hand for commissioners is to agree to an authorized ROE that is within the range or zone defined by the evidence.[83]

As a utility regulator, the recommendation must take into consideration the data, but also, blend public policy matters. In previous rate cases, the Commission appears to be using the concept of gradualism in setting the allowed rate of return for regulated utilities. Recommending a significant drop in rates could be detrimental for a regulated utility. The Division has attempted to blend the market constraints with the appropriate policy decisions.

Q. WAS THERE ANYTHING ELSE GUIDING THE DIVISION'S RECOMMENDATION OF 9.25 PERCENT?

A. Yes. Dr. John C. Bonbright discusses his conviction that when calculating the cost of equity capital for any given company the only such cost that can be determined with confidence is a *minimum* or *partial cost.*[84] He continues, explaining "[h]ence, if the

[83] National Association of Regulatory Utility Commissioners, A Cost of Capital and Capital Markets Primer for Utility Regulators, April 2020 page 20.

[84] James C. Bonbright, *Principles of Public Utility Rates* (New York: Columbia University Press, 1961), republished on the web (July 2005) Page 255:
http://www.terry.uga.edu/bonbright/publications

minimum estimated cost is to be used in the determination of a computed 'overall cost of capital,' the resulting computation should be subject to a material, 'judgement-reached' enhancement in order to give reasonable assurance of full-cost coverage."[85]

Dr. Bonbright believes the calculated rates should act as a minimum or partial cost when determining the fair rate of return. If there is a logical minimum threshold of allowed rates of return, then there would also be a maximum level for utility companies.

In the *Hope* and *Bluefield* cases, in the Division's opinion, the courts established an upper threshold for a fair rate of return for utility companies. In those cases, utility regulators are required to provide returns that must be equal to that currently earned on investments in other equally risky business enterprises. For a regulated electric utility, that would mean the fair rate of return would be very similar to allowed rates of return in other states. As shown earlier in my testimony, the average rate of return for similar companies with a similar risk to RMP, is 9.55 percent. Using these two theories as a guiding principle, I was able to determine the appropriate range for RMP's cost of capital at 7.24 percent to 9.17 percent. Because of policy considerations, the Division's own evaluation of current market risks and RMP's individual risk profile, the Division recommends a cost of equity for RMP of 9.25 percent.

[85] James C. Bonbright, *Principles of Public Utility Rates* (New York: Columbia University Press, 1961), republished on the web (July 2005) Page 255:
http://www.terry.uga.edu/bonbright/publications

XII. CONCLUSIONS AND RECOMMENDATIONS

Q. DO YOU BELIEVE YOUR CONCLUSIONS AND RECOMMENDATIONS ARRIVE AT JUST AND REASONABLE RESULTS THAT ARE IN THE PUBLIC INTEREST?

A. Yes.

Q. CAN YOU SUMMARIZE YOUR FINAL CONCLUSIONS AND RECOMMENDATIONS?

A. Based on my analysis, the appropriate cost of equity for RMP is 9.25 percent with an overall weighted average cost of capital of 7.19 percent. The Division's recommended ROE and its cost of capital estimate is just and reasonable and in the public interest. For all the reasons stated herein, the Commission should reject RMP's proposed cost of equity and weighted average cost of capital, which is not in the public interest.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes it does.