Witness OCS – 1S

BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

In the Matter of the Application of Rocky Mountain Power for Authority to Increase its Retail Electric Utility Service Rates in Utah and for Approval of its Proposed Electric Service Schedules and Electric Service Regulations	**)**	**Docket No. 20-035-04** **Phase I – Cost of Capital**

SURREBUTTAL TESTIMONY OF

DR. J. RANDALL WOOLRIDGE

FOR THE

OFFICE OF CONSUMER SERVICES

OCTOBER 8, 2020

Q. PLEASE STATE YOUR FULL NAME, ADDRESS, AND OCCUPATION.

A. My name is J. Randall Woolridge, and my business address is 120 Haymaker Circle, State College, PA 16801. I am a Professor of Finance and the Goldman, Sachs & Co. and Frank P. Smeal Endowed University Fellow in Business Administration at the University Park Campus of Pennsylvania State University. I previously filed testimony in this case for the Utah Office of Consumer Services (OCS) to provide an opinion as to the fair rate of return or cost of capital for PacifiCorp d/b/a Rocky Mountain Power ("RMP" or the "Company").

Q. WHAT IS THE PURPOSE OF YOUR SURREBUTTAL TESTIMONY?

A. I will respond to the rebuttal testimony of RMP witnesses Ms. Nikki L. Kobliha and Ms. Ann Bulkley.

Q. PLEASE OUTLINE THE ISSUES YOU ARE ADDRESSING IN YOUR SURREBUTTAL TESTIMONY?

A. I am covering the following issues in my surrebuttal testimony:

I. Summary of Positions

II. Authorized ROEs and Capital Market Conditions

III. Capital Structure

IV. The Riskiness of RMP

V. Equity Cost Rate Issues

A. Analysts' Projected EPS Growth Rates

B. CAPM Analysis

C. The Expected Earnings Approach

I. Summary of Positions

Q. PLEASE REVIEW THE COMPANY'S PROPOSED RATE OF RETURN OR COST OF CAPITAL.

A. In her rebuttal testimony, RMP witness Ms. Nikki L. Kobliha continues to recommend a capital structure consisting of 46.32% long-term debt, 0.01% preferred stock and 53.67% common equity. She has updated her debt cost rate to reflect the issuance of two new series of long-term debt — $400 million of 2.70% mortgage bonds due September 2030 and $600 million of 3.30% first mortgage bonds due March 2051. Her new long-term debt and preferred stock cost rates are 4.79% and 6.75%. RMP witness Ms. Ann E. Bulkley has updated her common equity cost rate analysis and has maintained that her initial 10.20% recommendation for RMP from her direct testimony is still appropriate. However, the Company has chosen to lower its requested ROE to 9.80% in its updated filing. As shown in Table 1, the Company's overall proposed rate of return is now 7.48%.

Table 1
RMP's Rate of Return Recommendation

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

Q. PLEASE REVIEW YOUR RECOMMENDATIONS REGARDING THE APPROPRIATE MARKET-BASED RATE OF RETURN FOR RMP.

A. I have reviewed the Company's proposed capital structure and overall cost of capital. As I noted in my direct testimony, RMP's proposed capitalization has more equity and

less financial risk than the average current capitalizations of electric utilities. Hence, I used a capital structure that is more reflective of the capital structures of electric utility companies. I am using a capital structure consisting of 50.0% debt/preferred stock and 50.00% common equity. To estimate an equity cost rate for the Company, I have applied the Discounted Cash Flow Model ("DCF") and the Capital Asset Pricing Model ("CAPM") to my proxy group of electric utility companies ("Electric Proxy Group"). I have also applied my analysis to Ms. Bulkley's Proxy Group ("Bulkley Proxy Group"). My DCF and CAPM analyses indicate an equity cost rate range of 7.60% to 8.95%.

Q. WHAT IS YOUR PRIMARY RATE OF RETURN RECOMMENDATION FOR RMP?

A. As noted, my equity cost rate studies indicate ROEs between 7.60% and 8.95%. I believe that this range accurately reflects current capital market data. However, I recognize that this range is below the authorized ROEs for electric utility companies nationally. Therefore, my primary ROE recommendation for RMP is 9.0%. This recommendation: (1) gives weight to the higher authorized ROEs for electric utility companies; and (2) recognizes the concept of 'gradualism' in which authorized ROEs are adjusted on a gradual basis to reflect changing trends in capital market data. Given my recommended capitalization ratios and RMP's updated proposed long-term debt and preferred stock rates (4.79% and 6.75%), my primary rate of return or cost of capital recommendation for the Company is 6.90% and is summarized in Table 2.

Table 2
OCS' Updated Primary Rate of Return Recommendation

Capital Source	Capitalization Ratios	Cost Rate	Weighted Cost Rate
Long-Term Debt	**49.99%**	**4.79%**	**2.39%**
Preferred Stock	**0.01%**	**6.75%**	**0.00%**
Common Equity	**50.00%**	**9.00%**	**4.50%**
Total Capital	**100.00%**		**6.90%**

Q DID YOU ALSO PROVIDE AN ALTERNATIVE RATE OF RETURN RECOMMENDATION FOR RMP?

A. Yes. My alternative rate of return recommendation uses RMP's proposed capital structure of 46.32% long-term debt, 0.01% preferred stock, and 53.67% common equity as well as RMP's updated long-term debt cost and preferred stock cost rates of 4.79% and 6.75%. With respect to the equity component of my recommendation for rate of return, my alternative ROE recommendation is 8.75%, which is at the high end of my equity cost rate range of 7.60% to 8.95%. Given my alternative capitalization ratios and senior capital cost rates, based on the Company's proposed capital structure, my alternative rate of return or cost of capital recommendation for the Company is 6.92% and is summarized in Table 3.

Table 3
OCS' Updated Alternative Rate of Return Recommendation

Capital Source	Capitalization Ratios	Cost Rate	Weighted Cost Rate
Long-Term Debt	**46.32%**	**4.79%**	**2.22%**
Preferred Stock	**0.01%**	**6.75%**	**0.00%**
Common Equity	**53.67%**	**8.75%**	**4.70%**
Total Capital	**100.00%**		**6.92%**

II. Authorized ROEs and Capital Market Conditions

Q. PLEASE REVIEW THE COMMISSION'S ORDER ON ROE IN RMP'S LAST RATE CASE.

A. On August 29, 2014, the Commission approved a settlement between the Company and intervenors in Docket No, 13-035-184. The settlement included a capital structure of 48.55% long-term debt, 0.02% preferred stock, and 51.43% common stock equity, debt and preferred cost rates of 5.20% and 6.75%, and a ROE of 9.80%. The overall rate of return on rate base was 7.57%.[1]

Q. HAVE CAPITAL COSTS INCREASED OR DECREASED SINCE THE COMPANY'S LAST RATE CASE?

A. Interest rates and capital costs have declined since the last case. As I showed in my direct testimony, the 30-year Treasury yield averaged about 3.0% between 2012 and 2018. During that time, the authorized ROEs in Utah were in the 9.80% range. However, the economy slowed and interest rates declined in 2019, and these yields continued to decline in 2020 and then dropped significantly when the novel coronavirus hit, significantly impacting the world's population, economy, and financial markets. This decline in interest rates and capital costs is one reason why RMP's authorized ROE must be lower than the 9.80% set in 2014 in RMP's last rate case, contrary to RMP's rebuttal position.

[1] *In the Matter of the Application of Rocky Mountain Power Company for authority to Increase its Retail Electric Utility Service Rates in Utah and for Approval for its Proposed Electric Service Schedules and Electric Service Regulations*, August 29, 2014.

Q. WHAT HAS HAPPENED TO AUTHORIZED ROES IN UTAH?

A. The only recent ROE determination in Utah was for the gas distribution service of Dominion Energy Utah, which was awarded a 9.5% ROE in a fully-litigated case. The Order in that case was dated February 25, 2020, which is effectively pre-coronavirus.

Q. AT PAGE 23 OF HER REBUTTAL TESTIMONY, MS. BULKLEY REFERS TO THE COMPANY'S RECENT ROE FROM ITS RATE CASE SETTLEMENT IN WASHINGTON. PLEASE RESPOND.

A. Ms. Bulkley refers to 2016 and 2020 rate cases in Washington involving PacifiCorp. She notes that the 9.50% ROE adopted in 2020 is the same ROE authorized in the 2016 case and uses this observation to suggest that: (1) ROEs have not declined despite the decline in interest rates; and (2) this Commission should keep RMP's authorized ROE in Utah at 9.80%, which it was awarded in 2014. There are several issues with these observations. First, the 2020 Washington case is a settlement. As Ms. Bulkley acknowledges, there are usually give-and-take items in a rate case settlement, which can include ROE, capital structure, and many different elements in a rate case. Second, the agreed upon capital structure in the 2020 Washington case included a common equity ratio of 49.10%,[2] which is much lower than RMP's proposed common equity ratio of 53.67%. Because higher equity means less risk, a 9.50% ROE at 49.10% equity means RMP should accept an ROE lower than 9.50% at a much higher equity ratio, such as at its requested 53.67% in this case.

[2] See Washington Utilities and Transportation Commission Docket No. UE-191024, Stipulation dated July 17, 2020. The stipulation adopts the capital structure from PacifiCorp's last rate case in Washington, filed in 2015, in which the WUTC authorized a 49.10% equity ratio.

Q. WHAT ARE THE REVENUE REQUIREMENT IMPLICATIONS OF THESE ALTERNATIVE CAPITAL STRUCTURE – AUTHORIZED ROE SCENARIOS FROM THE WASHINGTON RATE CASE SETTLEMENT?

A. OCS witness Ms. Ramas has provided the revenue requirement implications of the alternative capital structure – authorized ROEs scenarios discussed above. They are provided in Table 4.

Table 4
Utah Revenue Requirement Implications of Alternative Capital Structure – ROE Scenarios

OCS Direct Testimony Position on Adjustments	Revenue Change*
As filed 50% Equity @ 9.0% ROE	(59,285,929)
49.1% Equity @ 9.50% ROE (WA Settlement)	(39,970,796)
53.67% Equity @ 9.0% ROE	(39,964,158)
RMP Rebuttal Filing - Step 1 Increase (1/1/2021)	
Co. Request 53.67% Equity @ 9.80% ROE	49,511,653
49.1% Equity @ 9.50% ROE (WA Settlement)	5,963,188
53.67% Equity @ 9.0% ROE	6,039,814
RMP Rebuttal Filing - Total Increase After Step 2 (7/1/2021)	
Co. Request 53.67% Equity @ 9.80% ROE	72,049,907
49.1% Equity @ 9.50% ROE (WA Settlement)	27,653,609
53.67% Equity @ 9.0% ROE	27,731,727

*This shows JAM model revenue requirement differences from RMP's current revenue requirement at each specified ROE and equity percentages.

As discussed above, if RMP is authorized a 53.67% equity ratio in Utah, the company would be less risky than with its 49.1% equity ratio in Washington. This means that RMP's ROE in Utah should be lower than the 9.50% that it recently agreed to in Washington. Table 4 above shows that at a 53.67% equity ratio, RMP's ROE in Utah should be 9.0%, to be equivalent to its settlement in the Washington case.

Q. HAS MS. BULKLEY RECOGNIZED THAT INTEREST RATES AND CAPITAL COSTS HAVE DECLINED?

A. No. She clearly ignores the impact of low interest rates which seems to suggest that she believes that the level of interest rates has nothing to do with the return the equity investors require. Ms. Bulkley's direct and rebuttal testimonies and the results of her analyses indicate that the decline in interest rates does not matter to capital costs. This ignores the direct relationship between lower interest rates and lower capital costs.

Q. DOES RMP WITNESS BULKLEY HIGHLIGHT THE ACTIONS OF THE FEDERAL RESERVE IN RESPONSE TO THE CORONAVIRUS PANDEMIC?

A. Yes. Ms. Bulkley notes that the Federal Reserve has been active in monetary policy to support the economy in the wake of the coronavirus pandemic. Incredibly, she ignored a recent major pronouncement by Federal Reserve Chair Jerome Powell. In an interview on NPR on September 4th, Mr. Powell stated that the Fed would keep interest rates low for a number of years: "We think that the economy's going to need low interest rates, which support economic activity, for an extended period of time … It will be measured in years."[3] Subsequently, on September 15, 2020, Federal Reserve

[3] Jeff Cox, "Powell says duration of low interest rates 'will be measured in years'," CNBC, September 4,

officials made more specific Mr. Powell's September 4th comments, projecting that they would keep interest rates near zero through 2023 to help the economy fully recover from the pandemic.[4]

Q. MS BULKLEY DOES NOT DISCUSS HOW THE FED'S ACTIONS HAVE IMPACTED UTILITY BOND YIELDS. HAVE UTILITY BONDS YIELDS DECLINED WITH TREASURY BOND YIELDS?

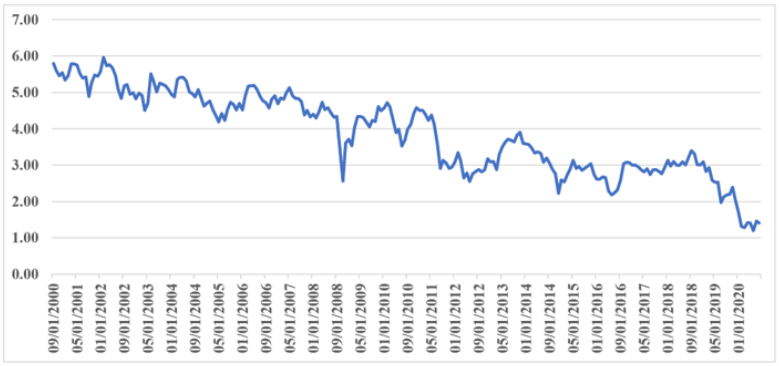
A. Yes. Figure 1 shows 30-year Treasury yields (Panel A), long-term 'A' rated utility yields (Panel B), and the yield differentials between these two yields (Panel C) over the 2000-20 time period. The yield differentials in Panel C shows that the spread between utility and Treasury yields has increased dramatically during the 2008 financial crisis and during March of this year as a result of the coronavirus. The yield differential has declined significantly in recent months, and is now back to the 1.0% to 1.5% range which it has been historically.

2020.

[4] https://www.politico.com/news/2020/09/16/federal-reserve-zero-interest-rate416202#:~:text=Federal%20Reserve%20officials%20on%20Wednesday,probably%20have%20to%20do%20more.

Figure 1

Panel A
30-Year Treasury Yield



Source: https://fred.stlouisfed.org/series/DGS30

Panel B
Long-Term 'A' Utility Bond Yields

Source: https:Mergent

Panel C
Long-Term 'A' Utility Bond Yields - 30-Year Treasury Yield

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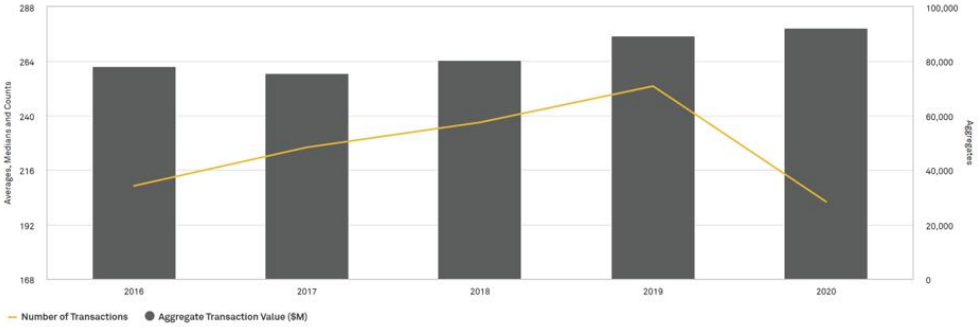
Q. HAVE UTILITIES TAKEN ADVANTAGE OF THE LOWER BOND YIELDS TO RAISE CAPITAL?

A. Yes. Figure 2 shows the amount of capital raised in debt (Panel A) and equity capital markets from 2016-2020. Utilities have especially taken advantage of the low interest rates; as of October 2, 2020, they have already raised a record amount of capital in the debt markets this year. The amount of equity raised by utilities is shown in Panel B. For 2020 year-to-date, the amount of equity is down a little relative to 2019, but this figure is only for the first nine months of 2020.

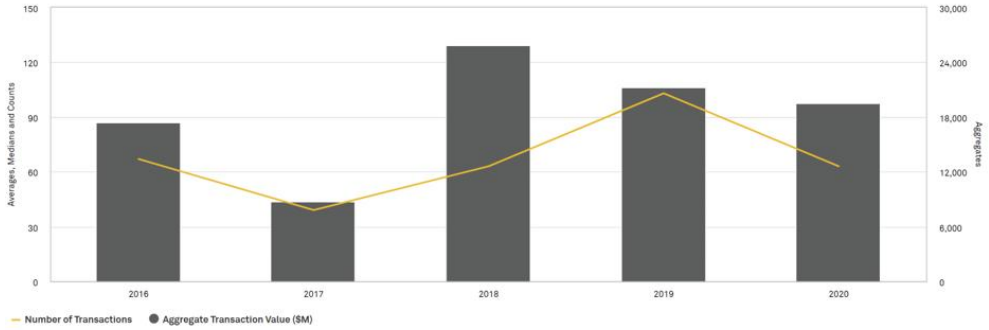
Figure 2

Panel A
Utility Debt Offerings
2016-2020



Source: S&P Global Market Intelligence.

Panel B
Utility Equity Offerings
2016-2020



Source: S&P Global Market Intelligence.

Q. IN HER DIRECT AND REBUTTAL TESTIMONIES, MS. BULKLEY IMPLIES THAT INTEREST RATES AND CAPITAL COSTS ARE ABOUT TO INCREASE, AND SHE USES HIGHER PROJECTED INTEREST RATES IN HER CAPM AND RISK PREMIUM MODELS. PLEASE RESPOND.

A. Ms. Bulkley argues that my ROE recommendations for RMP are not justified by current and expected market conditions. In her discussion of capital market conditions, Ms. Bulkley points to forecasts of long-term interest rates to imply that capital costs are about to increase and uses these forecasts in her CAPM and risk premium approaches.

Q. PLEASE DISCUSS THE FORECASTS OF HIGHER INTEREST RATES BY ECONOMISTS AND OTHER PROFESSIONAL FORECASTERS.

A. In my direct testimony, I highlighted that the consensus forecasts of economists are that interest rates are going higher and these forecasts are continually wrong. On this issue, I highlighted the following: (1) after the announcement of the end of Quantitative Easing III ("QEIII") program in 2014, all the economists in Bloomberg's interest rate survey forecasted interest rates would increase in 2014, and 100% of the economists were wrong;[5] (2) *Bloomberg* reported that the Federal Reserve Bank of New York has gone as far as stopping use of interest rate estimates of professional forecasters in its interest rate model;[6] (3) a study entitled "How Interest Rates Keep Making People on Wall Street Look Like Fools," which evaluated economists' forecasts for the yield on

[5] Ben Eisen, "Yes, 100% of economists were dead wrong about yields, *Market Watch*," October 22, 2014.

[6] Susanne Walker and Liz Capo McCormick, "Unstoppable $100 Trillion Bond Market Renders Models Useless," *Bloomberg.com* (June 2, 2014). http://www.bloomberg.com/news/2014-06-01/the-unstoppable-100-trillion-bond-market-renders-models-useless.html.

ten-year Treasury bonds at the beginning of the year for the last ten years.[7] The results demonstrated that economists consistently predict that interest rates will go higher, and interest rates have not fulfilled the predictions; and (4) a study that tracked economists' forecasts for the yield on ten-year Treasury bonds on an ongoing basis from 2010 until 2015, entitled "Interest Rate Forecasters Are Shockingly Wrong Almost All of the Time," demonstrate how economists continually forecast that interest rates are going up, and they do not.[8]

Q. PLEASE SUMMARIZE YOUR DISCUSSION OF THE INTEREST RATE FORECASTS USED BY MS. BULKLEY.

A. I recommend that the Commission ignore these forecasts because, as demonstrated in the above studies, economists are always predicting that interest rates are going up, and they have consistently been wrong. Ms. Bulkley makes a significant error in suggesting that investors share economists' views of higher rates and that these views are incorporated into their decision making. I highlight that investors would not be buying long-term Treasury bonds at current yields today if they followed economists' interest rate forecasts because a near-term increase in interest rates would result in a negative rate of return on those bonds.

[7] Joe Weisenthal, "How Interest Rates Keep Making People on Wall Street Look Like Fools," Bloomberg.com, March 16, 2015. http://www.bloomberg.com/news/articles/2015-03-16/how-interest-rates-keep-making-people-on-wall-street-look-like-fools.

[8] Akin Oyedele, "Interest Rate Forecasters Are Shockingly Wrong Almost All of the Time," *Business Insider*, July 18, 2015. http://www.businessinsHider.com/interest-rate-forecasts-are-wrong-most-of-the-time- 2015-7.

III. Capital Structure

Q. PLEASE REVIEW THE CAPITAL STRUCTURE ISSUES IN THIS CASE.

A. The Company has proposed a capital structure consisting of 46.32% long-term debt, 0.01% preferred stock and 53.67% common equity. I demonstrated that this capital structure has a higher common equity ratio than the Company's parent company and other electric utility companies. As a result, in my primary rate of return recommendation I have recommended a capital structure with a common equity ratio of 50.00%. In my alternative rate of return recommendation, I have used the Company's proposed capital structure, but with a lower ROE of 8.75% to reflect the higher common equity ratio and lower financial risk of RMP's proposed capital structure.

Q. IN ITS REBUTTAL TESTIMONY, THE COMPANY CRITICIZES YOUR PROPOSED CAPITAL STRUCTURE. PLEASE RESPOND.

A. In their rebuttal testimonies, Ms. Kobliha and Ms. Bulkley make several observations on my assessment of a proposed capital structure for RMP. They claim that: (1) it is appropriate to compare the common equity ratios of the operating electric utilities and not the holding companies; (2) I should not include short-term debt in assessing common equity ratios; and (3) there is no double leverage in the Company's capitalization relative to its parent, Berkshire Hathaway Energy (BHE).

Q. PLEASE ADDRESS THESE THREE ISSUES.

A. On the first issue, contrary to RMP's assertions, the appropriate comparison when it comes to common equity ratios is between the common equity ratio as proposed by

the Company and the average common equity ratios for the holding companies in the proxy groups. The reason is that both Ms. Bulkley and myself use the holding companies to estimate a cost of equity capital for the Company. That is because the holding companies have common stock outstanding, stock that is traded in the market, which enables us to apply DCF and CAPM equity cost rate modeling approaches. Without these holding company stock prices and dividends paid, we could not employ the DCF and CAPM models. Therefore, it is the holding companies' common equity ratios that are appropriate for comparison purposes, since their common equity ratio is what reflects their financial risk. The common equity ratios of the operating utilities are higher and therefore they are subject to less financial risk.

Second, it is appropriate to include short-term debt for the holding companies when making assessments regarding common equity ratios. I have not recommended the inclusion of short-term debt in the Company's capital structure. However, when assessing the financial leverage and risk associated with debt financing, it is appropriate to include short-term debt. And while Ms. Bulkley is correct that short-term debt tends to vary over time for utilities, that is irrelevant when it comes to evaluating financial risk when using holding company financial data. In assessing financial risk, short-term debt is included because, just like long-term debt, short-term has a higher claim on the assets and earnings of the company and requires timely payment of interest and repayment of principal. This is consistent with the approach used by S&P and Moody's in evaluating financial integrity and credit worthiness.[9]

[9] For example, see Moody's June 27, 2019 Credit Opinion on PacifiCorp provided as part of Ms. Kobliha's direct testimony as Confidential Workpaper NLK 1, page 1, where Moody's uses "Total Debt".

Third, Ms. Kobliha claims there is no double leverage in assessing the Company's proposed capitalization relative to that of its parent, BHE. However, she does not directly address the issue. The point that I have made is that BHE is taking advantage of double leverage in its management of RMP because regulators, such as the Utah Commission, allow the Company to double leverage if regulators set rates on RMP's capital structure and not based on BHE's consolidated capital structure. As I demonstrated in my direct testimony, BHE's consolidated capital structure has more leverage than RMP's. This is evidence that at least some of the equity in RMP has been financed by debt from BHE. The Commission should consider this fact in setting the capital structure and/or the ROE for RMP.

Q. ON A RELATED ISSUE, HOW DOES RMP'S PROPOSED COMMON EQUITY RATIO COMPARE TO THE COMMON EQUITY RATIOS APPROVED FOR ELECTRIC UTILITIES IN THE US?

A. While the Company's witnesses have discussed authorized ROEs for electric utilities, they have not made comparisons between their proposed common equity ratio and those adopted for electric utilities. According to S&P Global Market Intelligence – RRA, the average authorized common equity ratio for electric utilities in 2019-20 in the U.S. was 51.15%.[10] As such, RMP's proposed capitalization includes a higher common equity ratio than those approved by other state utility commissions.

[10] S&P Global Market Intelligence, RRA *Regulatory Focus*, 2020. The 51.14% figure excludes the approved common equity ratios for utilities in states which include cost-free capital items such as investment tax credits in the approved capitalizations.

IV. The Riskiness of RMP

Q. WHAT IS THE COMPANY'S TESTIMONY REGARDING THE RELATIVE RISK OF RMP?

A. Ms. Bulkley indicated in her direct testimony that she considered several other risk factors in arriving at her 10.20% ROE recommendation. She claims that (1) RMP's higher than average capital expenditures increase its risk relative to the proxy utility companies; (2) RMP's regulatory risk is high due to operating in Utah; and (3) RMP's generation ownership and fuel sources makes it riskier than other utilities.

Q. DO YOU AGREE WITH MS. BULKLEY THAT RMP IS RISKIER THAN OTHER ELECTRIC UTILITIES?

A. No. Ms. Bulkley's conclusion that RMP's capital expenditures and regulatory risk make RMP riskier than other electric utilities is erroneous. These two factors are risk factors that are already considered in the credit-rating process used by major rating agencies. RMP's issuer credit rating is A according to S&P and A3 according to Moody's. RMP's S&P rating (A) is two notches above the average S&P rating for the Electric and Bulkley Proxy Groups (BBB+). RMP's Moody's rating of A3 is one notch above the average Moody's rating for the Electric and Bulkley Proxy Groups (Baa1). As such, RMP is less risky than the utilities in the Electric and Bulkley Proxy Groups.

In addition, in terms of Utah regulatory risk, Ms. Bulkley claims that Utah ROEs are below those of other states. This is erroneous. For example, consider that the Commission approved a ROE of 9.50% for the gas distribution operations of

Dominion Energy Utah in February of this year. This compares to a national average gas distribution utility ROE of 9.40% in 2020.[11]

Q. DOES MS. BULKLEY ADDRESS UTAH'S RESOURCE PREAPPROVAL STATUTES IN MAKING HER CLAIM THAT RMP IS MORE RISKY THAN THE COMPANIES IN HER PROXY GROUP BECAUSE OF RMP'S RECENT AND PLANNED LARGE CAPITAL EXPENDITURES?

A. No. To recap, in her direct testimony Ms. Bulkley argues that RMP is riskier than her proxy group of companies because of RMP's recent and planned large capital expenditures and the fact that RMP does not have a capital tracking mechanism, such as 52% of her proxy group utilities, to recover large capital costs.[12] Ms. Bulkley repeats this claim in her rebuttal testimony.[13] However, Utah has two statutory mechanisms to receive Commission preapproval of large capital expenditures.

Q. WHAT ARE UTAH'S STATUTORY MECHANISMS THAT LESSEN THE RISK OF LARGE CAPITAL EXPENDITURES?

A. Utah's Significant Energy Resource Approval statute, Utah Code §§ 54-17-302 through 54-17-304 and Voluntary Request for Resource Decision Review statute, Utah Code §§ 54-17-401 through 54-17-404, provide mechanisms for RMP to obtain preapproval of projected costs of significant capital expenditures. Once preapproval is obtained from the Commission, which will occur prior to the expenditure of any substantial funds, RMP will be guaranteed recovery up to that amount preapproved in

[11] S&P Global Market Intelligence, RRA *Regulatory Focus*, 2020.

[12] Direct Testimony of Ann E. Bulkley, p. 60-63.

[13] Rebuttal Testimony of Ann E. Bulkley, p. 76.

the next rate case. RMP has recently utilized these statutes in recent cases involving large capital expenditures for wind resources and transmission lines to insulate itself from risk related to the cost recovery for these projects.[14]

Q. AS A REGULATED UTILITY, DO THESE STATUTES SIGNIFICANTLY MITGATE THE RISKS ASSOCIATED WITH RMP'S LARGE CAPITAL INVESTMENTS?

A. Yes, that is one the results of these statutes.

Q. ARE THERE ANY OTHER STATUTES THAT REDUCE RMP'S RISK OF CAPITAL EXPENDITURE RECOVERY IN RATES?

A. Yes, Utah Code §§ 54-7-13.4, Alternative Cost Recovery for Major Plant Addition, allows RMP to begin recovery of costs in rates for major capital expenditures in between rate cases. This reduces regulatory lag that would otherwise occur due to waiting until the next rate case and would increase the utility's cash flow.

Q. DOES MS. BULKLEY ACKNOWLEDGE THE RESOURCE PREAPPROVAL AND MAJOR PLANT ADDITION STATUTES IN HER ANALYSIS OF RMP'S BUSINESS RISKS IN UTAH?

A. No she does not.

[14] *See Voluntary Request of Rocky Mountain Power for Approval of Resource Decision to Repower Wind Facilities,* Docket 17-035-39; *Application of Rocky Mountain Power for Approval of a Significant Energy Resource Decision and Voluntary Request for Approval of Resource Decision,* Docket 17-035-40.

Q. CONSIDERING THIS ISSUE OF REDUCED UTAH-SPECIFIC RISKS, IS THE COMPANY'S POSITION IN THIS CASE CONSISTENT WITH ITS POSITION IN ITS CURRENT RATE CASE IN WYOMING?

A. No. RMP lists some of the same risk factors in its current rate case in Wyoming but then provides additional Wyoming specific risks. In the Wyoming case, Ms. Bulkley is the ROE witness and, as in this case, the Company in rebuttal has moderated its ROE request to 9.80%. However, Ms. Bulkley in the Wyoming proceeding argues that RMP deserves a higher ROE in Wyoming since the state has unique risk factors associated with limited cost recovery mechanisms. In addition, RMP witness Hoogeveen argues that Wyoming's treatment of coal-fired generation increases RMP's risk in that state.[15] Because Utah does not have these Wyoming specific issues, RMP's ROE in Utah should be lower than in Wyoming.

Q. **MS. KOBLIHA STATES THAT RMP'S SUPERIOR CREDIT RATINGS ARE IN JEOPARDY IF COMMISSIONS DO NOT SUPPORT RMP'S CASH FLOW AND DEBT RATIOS BY AUTHORIZING A GENEROUS EQUITY RATIO PERCENTAGE.[16] DO YOU AGREE?**

A. No. First, as noted above, RMP's S&P and Moody's issuer credit ratings of A and A3 are already significantly better than the average of the two proxy groups. Second, as shown on page 2 of my direct testimony Exhibit JRW-3.2, RMP has achieved its superior credit rating with an average common equity ratio of 51.79% over the past three years.

[15] See Docket No. 20000-578-ER-20, Wyoming Public Service Commission, Direct testimony of Anne Bulkley, pp. 66-73; Rebuttal testimony of Anne Bulkley, pp. 5, 63; Rebuttal testimony of Gary Hoogeveen, pp. 3.

[16] Kobliha Rebuttal testimony, pages 6 – 7.

Third, this is an erroneous conclusion because awarding a generous common equity ratio only takes money from ratepayers and puts it in the pockets of Pacificorp's shareholders. Furthermore, in the Washington rate case settlement referenced earlier, PacifiCorp accepted a 49.1% equity ratio with a 9.50% ROE.

Q. IN CONCLUSION, WHAT IS THE IMPLICATION OF RMP HAVING LESS INVESTMENT RISK THAN OTHER ELECTRIC UTILITIES?

A. The clear implication is that the companies in the Electric and Bulkley Proxy Groups are riskier than RMP and therefore using these firms will produce a higher ROE than RMP requires. As a result, the Commission should recognize the lower investment risk of RMP in setting the ROE in this case.

V. Equity Cost Rate Issues

1. DCF Approach

Q. INITIALLY, PLEASE DISCUSS MS. BULKLEY'S COMMENTS ON YOUR PROXY GROUP.

A. In her rebuttal testimony, Ms. Bulkley criticizes my proxy group because it includes distribution companies. However, the proxy group is not an issue, since I also use her proxy group. In addition, I use credit ratings as a measure of risk, and RMP is less risky than either proxy group.

Q. PLEASE HIGHLIGHT THE ISSUES YOU IDENTIFIED WITH MS BULKLEY'S DCF ANALYSIS.

A. In my direct testimony, I identified a number of errors in Ms. Bulkley's DCF analysis. As I highlighted in my testimony, Ms. Bulkley has seriously overstated her reported DCF results in four ways: (1) she selectively eliminated low-end DCF results; (2) she has exclusively used the overly optimistic and upwardly biased EPS growth rate forecasts of Wall Street analysts and *Value Line*; (3) she has created her own new version of the DCF model – the projected constant-growth DCF model - in which she projects DCF inputs into the future; and (4) she has claimed that the DCF results underestimate the market-determined cost of equity capital due to high utility stock valuations and low dividend yields.

Q. HAS MS. BULKLEY ADDRESSED THESE ISSUES IN HER REBUTTAL TESTIMONY?

A. No, not in any meaningful way.

(1) With respect to her asymmetric low-end DCF eliminations, I noted that without the low-end eliminations, her DCF results go from an average of 8.93% down to 8.59%. As I indicated in my initial testimony, by eliminating asymmetric low-end results, she has committed a basic statistics error called errors-in-variables (EIV). She has not addressed her statistical error in rebuttal.

(2) With respect to her exclusively using the overly optimistic and upwardly biased EPS growth rate forecasts of Wall Street analysts and *Value Line*, Ms. Bulkley claims: (1) the Global Analysts Settlement "reduced or eliminated" the upward bias; and (2) cites the results of a study I cited by Hovakimian and Saenyasiri who report that the bias declined in response to the Global Analysts Settlement. There are two errors here. First, the Hovakimian and Saenyasiri study did not use or evaluate long-

term EPS growth rates, but instead used short-term EPS growth rate forecasts. In addition, I addressed the "changes in regulation" issue in my initial testimony. I cited a number of studies published since that time which highlight the upward bias in analysts' EPS growth rate estimates. In addition, a McKinsey study entitled "Equity Analysts: Still Too Bullish" evaluated the accuracy on analysts long-term EPS growth rate forecasts. The authors conclude that after a decade of stricter regulation, analysts' long-term earnings forecasts continue to be excessively optimistic. They made the following observation: [17]

> Alas, a recently completed update of our work only reinforces this view—despite a series of rules and regulations, dating to the last decade, that were intended to improve the quality of the analysts' long-term earnings forecasts, restore investor confidence in them, and prevent conflicts of interest. For executives, many of whom go to great lengths to satisfy Wall Street's expectations in their financial reporting and long-term strategic moves, this is a cautionary tale worth remembering. This pattern confirms our earlier findings that analysts typically lag behind events in revising their forecasts to reflect new economic conditions. When economic growth accelerates, the size of the forecast error declines; when economic growth slows, it increases. So as economic growth cycles up and down, the actual earnings S&P 500 companies report occasionally coincide with the analysts' forecasts, as they did, for example, in 1988, from 1994 to 1997, and from 2003 to 2006. Moreover, analysts have been persistently overoptimistic for the past 25 years, with estimates ranging from 10 to 12 percent a year, compared with actual earnings growth of 6 percent. Over this time frame, actual earnings growth surpassed forecasts in only two instances, both during the earnings recovery following a recession. On average, analysts' forecasts have been almost 100 percent too high. (emphasis added).

This is the same observation made in a *Bloomberg Businessweek* article.[18] The author concluded:

[17] Marc H. Goedhart, Rishi Raj, and Abhishek Saxena, "Equity Analysts, Still Too Bullish," *McKinsey on Finance,* pp. 14-17, (Spring 2010).

[18] Roben Farzad, "For Analysts, Things Are Always Looking Up," *BloombergBusinessweek* (June 10, 2010).

The bottom line: Despite reforms intended to improve Wall Street research, stock analysts seem to be promoting an overly rosy view of profit prospects.

(3) As noted above, given her low DCF results, she has created her own new version of the DCF model – the projected constant-growth DCF model. In this case she projects DCF inputs into the future and then computes a DCF five years in the future. Ms. Bulkley has no defense for this approach, since she is using a ROE model she created which has no foundation in the field of finance.

(4) As a last ditch effort to defend her results, she has claimed that the DCF results underestimate the market-determined cost of equity capital due to high utility stock valuations and low dividend yields. She does this at several places in her testimony. She has made similar claims in her testimonies in recent years, to "discredit" her own low DCF results, even as utility stock prices have continued to increase. The bottom line is that she is claiming that she knows more about the valuation of utility stocks than investors and the markets.

Q. ON PAGES 95-96 0F HER REBUTTAL TESTIMONY, MS. BULKLEY IMPLIES THAT YOU USE HISTORIC GROWTH RATES IN YOUR DCF ANALYSIS. IS THIS CORRECT?

A. No. I did review historical growth rates, since most data available to investors is historical. However, as discussed in my testimony, in arriving at my DCF growth rates, I used the overall range of the projected growth rate indicators, and gave primary weight to the projected EPS growth rate of Wall Street analysts. In doing so, I recognized that: (1) analysts' growth rate forecasts have a significant impact on investors' expectations; and (2) the scientific evidence on analysts' long-term EPS

growth rate forecasts indicates that these forecasts are overly optimistic and upwardly biased, therefore one should not solely rely on these forecasts.

Q. ON PAGES 96-97 OF HER REBUTTAL TESTIMONY MS. BULKLEY CRITICIZES YOUR SUSTAINABLE GROWTH RATE CALCULATION. PLEASE RESPOND.

A. I have used internal sustainable growth as one of my thirteen measures of growth for both the Electric and Bulkley Proxy Groups. Sustainable growth includes: (1) internal growth which is measured as the retention rate ("B") times the expected ROE ("R") and is referred to as "B * R"; and (2) external growth which is measured as the growth in the number of shares ("S") times the portion of the market-to-book ratio that exceeds 1.0 ("V") and is referred to as "S * V."[19] I have relied upon internal growth because, of the two measures, (1) internal growth is the predominant component of sustainable growth and (2) external growth is speculative in that the calculation includes projections of a future market-to-book ratio as well as future issues of stock. Ms. Bulkley's incorrect objection is that I only used the B * R form of sustainable growth.

Q. IS MS. BULKLEY CORRECT IN HER ASSERTION THAT YOU DID NOT INCLUDE S * V GROWTH?

A. No. Whereas I calculate sustainable growth as B * R as one of my DCF growth rate measures, I have also used *Value Line*'s projected book value per share growth rate. This growth rate calculation includes *Value Line*'s explicit estimate of sustainable growth, which presumably includes B*R and S*V.

[19] The retention rate is the percent of earnings retained by a company and reinvested in the company's asset base. The market to book ratio is the market value of a company's equity (i.e., the stock price) dividend by the book value (the value on the balance sheet).

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493 **2. CAPM Approach**

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495 **Q. PLEASE DISCUSS THE ISSUES WITH MS BULKLEY'S CAPM ANALYSIS.**

496 A. In my initial testimony, I identified a number of issues with Ms. Bulkley's CAPM
497 analysis. These issues were: (1) her long-term projected (3.20%) 30-year Treasury
498 yields are well in excess of current market yields; (2) she has employed the Empirical
499 CAPM ("ECAPM") version of the CAPM, which makes inappropriate adjustments to
500 the risk-free rate and the market risk premium; and (3) most significantly, she has
501 computed a market risk premium of 12.49%. The 12.49% market risk premium is
502 much larger than: (1) indicated by historic stock and bond return data; and (2) found
503 in the published studies and surveys of the market risk premium. In addition, I
504 demonstrate that the 12.49% market risk premium is based on totally unrealistic
505 assumptions of future economic and earnings growth and stock returns. To compute
506 her market risk premium, Ms. Bulkley has applied the DCF to the S&P 500 and
507 employed analysts' three-to-five-year earnings per share ("EPS") growth-rate
508 projections as a growth rate to compute an expected market return and market risk
509 premium. As I demonstrated in my initial testimony, the EPS growth-rate projection
510 used for the S&P 500 and the resulting expected market return and market risk
511 premium include totally unrealistic assumptions regarding future economic and
512 earnings growth and stock returns.

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Q. HOW DID MS. BULKLEY RESPOND IN HER REBUTTAL TESTIMONY?

A. She updated her CAPM analysis. She used current/near-term projected/long-term projected risk-free rates of 1.34%/1.70%/3.00%, a market risk premium of 13.95%, and betas from both Value Line and Bloomberg. Her updated CAPM results vary from 11.63% to 12.58%, and her ECAPM results are 30 to 50 basis points higher.

Q. WHAT ARE THE ERRORS IN MS. BULKLEY UPDATED CAPM?

A. The errors are the same as in her original CAPM and I addressed these issues in my direct testimony. They include: (1) the use of the so-called ECAPM, (2) the projected risk-free interest rate and, (3) the most significant error, is her market risk premium. The market risk premium is the primary driver of her highly overstated CAPM/ECAPM results. The calculation of Ms. Bulkley's market risk premium is shown in Table 5.

Table 5
Bulkley CAPM Market Risk Premium

Dividend Yield	**1.72%**
+ Expected EPS Growth	**12.12%**
= Expected Market Return	**13.95%**
- Risk-Free Rate	**1.34%**
= Market Risk Premium	**12.60%**

The primary issue with Ms. Bulkley's approach is using the overly optimistic, upwardly biased projected EPS growth rates of Wall Street analysts as the DCF growth component for the S&P 500. In my direct testimony, I described in detail why her risk premium approach is not appropriate for the following reasons:

1. Ms. Bulkley's market risk premium of 12.60% is well above market-risk premiums: (1) found in studies of the market-risk premium by leading

academic scholars; (2) produced by analyses of historic stock and bond returns; and (3) found in surveys of financial professionals.

2. Ms. Bulkley's CAPM market-risk premium methodology is based entirely on the concept that analysts' projections of companies' three-to-five EPS growth rates reflect investors' expected long-term EPS growth for those companies. Numerous studies have shown that the long-term EPS growth rate forecasts of Wall Street securities analysts are overly optimistic and upwardly biased.[20] Moreover, a 2011 study showed that analysts' forecasts of EPS growth over the next three-to-five years earnings are no more accurate than their forecasts of the next single year's EPS growth.[21] The overly-optimistic inaccuracy of analysts' growth rate forecasts leads to an upward bias in equity cost estimates that has been estimated at about 300 basis points.[22]

3. Changes in regulations and reporting requirements over the past two decades have not impacted the fact that analysts' long-term earnings forecasts continue to be excessively optimistic.

4. Over the long-term, there is a direct link between EPS and GDP growth rates, and historically they have grown in the 6%-7% range;

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[20] Such studies include: R.D. Harris, "The Accuracy, Bias, and Efficiency of Analysts' Long Run Earnings Growth Forecasts," *Journal of Business Finance & Accounting*, pp. 725-55 (June/July 1999); P. DeChow, A. Hutton, and R. Sloan, "The Relation Between Analysts' Forecasts of Long-Term Earnings Growth and Stock Price Performance Following Equity Offerings," *Contemporary Accounting Research* (2000); K. Chan, L., Karceski, J., & Lakonishok, J., "The Level and Persistence of Growth Rates," *Journal of Finance,* pp. 643−684, (2003); M. Lacina, B. Lee, and Z. Xu, *Advances in Business and Management Forecasting (Vol. 8),* Kenneth D. Lawrence, Ronald K. Klimberg (ed.), Emerald Group Publishing Limited, pp.77-101.

[21] M. Lacina, B. Lee, & Z. Xu, *Advances in Business and Management Forecasting,* Vol. 8, Kenneth D. Lawrence, Ronald K. Klimberg (ed.), Emerald Group Publishing Limited, pp.77-101.

[22] Peter D. Easton & Gregory A. Sommers, "Effect of Analysts' Optimism on Estimates of the Expected Rate of Return Implied by Earnings Forecasts," 45, *Journal of Accounting Research,* pp. 983–1015 (2007).

5. The trends and projections indicate slower GDP growth in the future, with the average projected GDP growth rates by such agencies as Social Security Administration, Energy Information Administration, and the Congressional Budget Office in the 4.0% to 4.4% range. A major reason for the projected slower GDP growth in the future is the slowing growth of the population (and therefore workforce) in the U.S.

6. On a year-to-year basis, S&P 500 EPS growth rates are much more volatile than the GDP growth rates because the EPS growth for the S&P 500 companies can be influenced by factors like labor costs, interest rates, commodity prices, or the recovery of different sectors. These short-term factors can make it appear that there is a disconnect between the economy and corporate profits. But over time S&P 500 EPS growth rates tie to GDP growth rates.

7. Corporate profits are constrained by GDP. Milton Friedman, the noted Nobel Laureate economist, warned investors and others not to expect corporate profit growth to sustainably exceed GDP growth, stating, "Beware of predictions that earnings can grow faster than the economy for long periods. When earnings are exceptionally high, they don't just keep booming."[23] Friedman also noted in the Fortune interview that profits must move back down to their traditional share of GDP. Likewise, Warren Buffett noted the following:[24]

> You know, someone once told me that New York has more lawyers than people. I think that's the same fellow who thinks profits will become larger than GDP. When you begin to expect the growth of

[23] Shaun Tully, "Corporate Profits Are Soaring. Here's Why It Can't Last," Fortune, (Dec. 7, 2017), http://fortune.com/2017/12/07/corporate-earnings-profit-boom-end/.

[24] Carol Loomis, "Mr. Buffet on the Stock Market," *Fortune*, (Nov. 22, 1999), https://money.cnn.com/magazines/fortune/fortune_archive/1999/11/22/269071/.

> a component factor to forever outpace that of the aggregate, you get into certain mathematical problems. In my opinion, you have to be wildly optimistic to believe that corporate profits as a percent of GDP can, for any sustained period, hold much above 6%.

And Mr. Buffett goes on to explain what corporate profits will remain at about 6% of GDP:

> One thing keeping the percentage down will be competition, which is alive and well. In addition, there's a public-policy point: If corporate investors, in aggregate, are going to eat an ever-growing portion of the American economic pie, some other group will have to settle for a smaller portion. That would justifiably raise political problems – and in my view a major reslicing of the pie just isn't going to happen.

In summary, Ms. Bulkley's long-term S&P 500 EPS growth rate of 12.12%, which produce her market risk premium of 12.60%, is grossly overstated and is untethered from economic reality. In the end, the big question remains as to whether corporate profits can grow faster than GDP. Jeremy Siegel, the renowned finance professor at the Wharton School of the University of Pennsylvania, believes that going forward, earnings per share can grow about half a point faster than nominal GDP, or about 5.0%, due to the big gains in the technology sector. But he also believes that sustained EPS growth matching analysts' near-term projections is absurd: "The idea of 8% or 10% or 12% growth is ridiculous. It will not happen."[25]

Q. WHAT IS THE BOTTOM LINE ON THIS GROWTH RATE AND CAPM ISSUE?

A. The magnitude of Ms. Bulkley's CAPM results is driven by the 12.12% projected EPS growth rate used to derive her 12.60% market risk premium. Given that long-term nominal projected GDP growth is in the 4.0% to 4.4% range, she is projecting that the

[25] Shaun Tully, "Corporate Profits Are Soaring. Here's Why It Can't Last," *Fortune*, (Dec. 7, 2017), http://fortune.com/2017/12/07/corporate-earnings-profit-boom-end/.

EPS for the S&P 500 will grow at three times GDP growth. This is totally unrealistic. No trained economist would agree that, over the long-term, companies can grow their earnings at three times GDP growth. In reviewing Ms. Bulkley's dubious claim, I suggest that the Commission also review the comments of Milton Friedman, Warren Buffett, and Jeremy Siegel above regarding the long-term tie between EPS and GDP growth. Ms. Bulkley's CAPM approach and results are clearly at odds with their statements.

Q. IN HER REBUTTAL TESTIMONY, MS. BULKLEY TAKES ISSUE WITH A COUPLE OF ELEMENTS OF YOUR CAPM MARKET RISK PREMIUM OF 6.0%. PLEASE RESPOND.

A. Between pages 109-115 Ms. Bulkley takes issue with several elements of my market risk premium. As I noted in my direct testimony, there are three commonly-used procedures for estimating a market risk premium – historic returns, surveys, and expected return models. I have used a market risk premium of 6.00%, which: (1) factors in all three approaches – historic returns, surveys, and expected return models – to estimate a market premium; and (2) employs the results of many studies of the market risk premium. As I note, the 6.00% figure reflects the market risk premiums: (1) determined in recent academic studies by leading finance scholars; (2) employed by leading investment banks and management consulting firms; and (3) found in surveys of companies, financial forecasters, financial analysts, and corporate CFOs.

To assess the credibility of my market risk premium, I suggest that the Commission do a Google internet search of 'market risk premium' and 'equity risk premium.' If you do, you will find many of the studies and sources that I use in

developing my market risk premium. Those include Duff & Phelps, Damodaran, Fernandez, KPMG, among others. In addition, while I did review a number of other sources, surveys, and studies, I gave primary weight to these sources in arriving at my 6.0% market risk premium. I guarantee if the Commission does an internet search, it will not find anyone recommending a market risk premium as high as 12.60%.

3. <u>Expected Earnings Approach</u>

Q. BETWEEN PAGES 74-75 AND 123-124 OF HER REBUTTAL TESTIMONY, MS. BULKLEY ATTEMPTS TO DEFEND HER EXPECTED EARNINGS APPROACH. HOW DO YOU RESPOND?

A. As I noted in my direct testimony, the Expected Earnings approach does not measure the cost of equity capital. I noted several issues with this approach in my direct testimony. These include:

1. The expected earnings approach is an accounting-based methodology that does not measure investor return requirements and therefore it does not measure the market cost of equity capital;

2. The changes in ROE ratios do not track capital market conditions and therefore are insensitive to changes in interest rates and the returns investor's require;

3. The expected earnings approach is circular in that the ROEs for the proxy companies are not determined by competitive market forces, but instead are largely the result of federal and state rate regulation; and

4. The ROEs for the proxy utilities reflect earnings on business activities that are not representative of RMP's rate-regulated utility activities.

Q. HAVE ANY REGULATORY COMMISSIONS REJECTED THE EXPECTED EARNINGS APPROACH TO ESTIMATING THE COST OF EQUITY CAPITAL?

A. Yes. For essentially the reasons outlined above, in Opinion No. 569 the Federal Energy Regulatory Commission recently rejected the use of the expected earnings model because it does not measure the cost of equity capital.[26]

Q. DO YOU HAVE ANY FINAL THOUGHTS ON USING THE EXPECTED EARNINGS APPROACH TO ESTIMATE THE COST OF EQUITY CAPITAL?

A. Yes. To defend the use of the Expected Earnings approach, at pages 74-75 Ms. Bulkley quotes a book by Roger Morin, a well-known utility company rate of return witness. I recently testified in a case in Washington involving Puget Sound Energy, a case where Dr. Morin testified. And the real irony here is that while Ms. Bulkley uses Dr. Morin's book as justification for using this approach, Dr. Morin himself does not use the expected earnings approach in estimating the cost of equity capital for a public utility.[27]

Q. DOES THIS CONCLUDE YOUR SURREBUTTAL TESTIMONY?

A. Yes.

[26] Federal Energy Regulatory Commission, *Opinion No. 569*, P. 208-212.

[27] See PSE-Exh-RAM-01T-6-20-19, Washington Utilities and Transportation Commission vs. Puget Sound Energy, Docket Nos UE-190529 and UG-190530, June 2019.