Montana Public Service Commission

Jason T. Brown
Montana Consumer Counsel
PO Box 201703
111 North Last Chance Gulch, Suite lB
Helena MT 59620-1703

RE: Data requests in Docket D2017.9.80

Dear Mr. Brown:

Enclosed please find Data Requests PSC-110 through PSC-137 of the Montana Public Service Commission to the Montana Consumer Counsel in the above referenced Docket. Please begin the response to each new numbered data request on a new page. Please provide responses on or before March 23, 2018. If you have any questions, please contact me at (406) 444-6184.

If you have any questions, please contact me at (406) 444-6184.

Sincerely,

Dagan Lynch
Rate Analyst
Regulatory Division
Montana Public Service Commission

cc: Service List

Service Date: March 9, 2018

DEPARTMENT OF PUBLIC SERVICE REGULATION
BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MONTANA

IN THE MATTER of the Joint Application for Approval to Change and Establish Natural Gas Delivery Service Rates for Energy West Montana, Inc. and Cut Bank Gas Company	))))	REGULATORY DIVISION DOCKET NO. D2017.9.80

DATA REQUESTS PSC-110 THROUGH PSC-137 OF THE MONTANA PUBLIC SERVICE COMMISSION TO THE MONTANA CONSUMER COUNSEL

PSC-110

Regarding: Electronic Files
Witness: All

Please provide electronic copies of all exhibits and all Excel files used in developing your direct testimony and exhibits or that you relied on in formulating your opinions, in their native format with supporting files, all formulas intact, and calculations traceable.

PSC-111

Regarding: Electronic Files
Witness: Hill

Please provide a copy of every publication and source document cited in your testimony and exhibits.

PSC-112

Regarding: Electronic Files
Witness: Hill

Please provide a list of every docket before any state, federal or utility body, in which, during the last five years, you have provided testimony related to the rate of return or return on equity. The list should include the name of the regulatory body, docket number and the party on whose behalf you testified.

PSC-113

Regarding: SME
Witness: Schultz

a. Please assume the SME pipeline is placed in rate base at $75,000 less depreciation as proposed by the MCC. How does the MCC propose to treat any future updates to the pipeline?
b. If the updates or infrastructure investments exceed the $75,000 does the MCC agree the asset value should be increased?
c. If the Montana Department of Revenue were to tax the SME pipeline at the build price rather than the $75,000 acquisition price do you agree EWM should be allowed to recover the increased tax liability regardless of the amount put into rate base? If not, why?

PSC-114

Regarding: Revenue Requirement Adjustments
Witness: Schultz

a. Please provide the proposed MCC revenue requirement adjustments and rate base additions in an Excel Spreadsheet akin to the one in the response to Data Response (DR) PSC-023, Tab, SUM DTL EWM (Nov. 22, 2017).

b. Please provide the proposed MCC revenue requirement adjustments and rate base additions in an Excel Spreadsheet akin to the one in DR PSC-024 (Nov. 22, 2017).

PSC-115

Regarding: Bond Rating
Witness: Hill

a. Please explain if you have ever used the current average yield on bond rated long term utility debt as the cost of debt. If the answer is yes, please explain why it is not appropriate to use a bond rating for long term debt in this proceeding.

b. You have chosen to exclude Chesapeake Utilities (CPK) for lack of a bond rating. If you have relied on bond ratings from utility companies in the past please explain the rational for excluding (CPK) in this proceeding.

PSC-116

Regarding: Capital Structure
Witness: Hill

Referencing your testimony page 17, lines 7-9 please provide evidence that EWM can or has borrowed cheaply from its parent company, (GNI).

PSC-117

Regarding: Research
Witness: Hill

a. Referencing your testimony page 21, lines 12-16 please explain why you have chosen to use a publication that was ceased in 2001.

b. Can you provide more current research than that cited on page 21 of your testimony?

PSC-118

Regarding: Earnings-price ratio (E/P)
Witness: Hill

a. How is the E/P you describe different from the Midpoint Theory developed by the Federal Power Commission (FPC)?

b. Does the Federal Energy Regulatory Commission (FERC) currently rely on the E/P or Midpoint Theory methodology to determine allowable rates of return?

c. What critiques has the FPC or FERC expressed regarding the E/P or Midpoint Theory?

PSC-119

Regarding: Market to book analysis
Witness: Hill

Please explain the difference between your discounted cash follow analysis and your market-to-book analysis in more narrative. Is the market to book analysis adding the retention growth rate and dividend yield together in the standard DCF formula?

PSC-120

Regarding: Value Line Forecasts
Witness: Hill

On page 12 of your testimony (lines 4-10) you reference a Quarterly Economic Revue published in December 2017 (The Value Line Investment Survey, Selection & Opinion, December 1, 2017) which you use to compare Value Lines 3Q & 4Q projected long-term Treasury bond rates (3.5%) to the Fed's H.15 Statistical release, which indicated a 2.82% yield over that same time period. Please provide the excerpt from the Value Line publication (cited above) which indicates a projected long-term Treasury bond rate of 3.5% by the end of 2017.

PSC-121

Regarding: Capital Structure- Ability to obtain financing
Witness: Hill

a. Pursuant to D2016.11.91, referenced on page 16 of your testimony (footnote), did the joint applicants seek stand-alone financing (loans, lines of credit)?

b. If the answer to subpart (a) is yes, please discuss the results of their efforts. In your response please specifically identify the financial institutions from whom the joint applicants sought financing and include whether or not terms were offered by the financial institutions.

c. In reference to subpart (b) above, if terms were offered please describe the terms offered by each financial institution.
Considering your response to subpart (c), in your opinion, is the manner in which the joint applicants now obtain financing (inter-corporate capital arrangement) preferable to the terms offered and described in subpart (c) above? Please clearly explain your reasoning in your response.

PSC-122

Regarding: Capital Structure- Short Term Debt
Witness: Hill

a. Would you agree that companies use short-term debt predominantly as a means to satisfy working capital requirements?

b. If your answer to subpart (a) is yes, would you also agree that through the combination of a sufficient overall revenue requirement and effective rate design, a utility would, in theory, be able to meet the working capital requirements of its operations?

c. In the event that a utility is able to meet its working capital needs through rates charged to customers, would the total financing requirement-for capital outlay purposes-be met through a combination of long-term debt and equity financing?

PSC-123

Regarding: Proposed Rate Making Capital Structure
Witness: Hill

On page 19 of your testimony (lines 24-25) you represent that your recommended capital structures for EWM & CBGC can be found in Exhibit (SGH-1) pages 5 and 7, respectively. Exhibit (SGH-1) page 5 shows the Natural Gas Utilities (Scheig Sample Group) capital structure, excluding short-term debt. This would seem to contradict the proposed rate making capital structure described on page 4 (lines 23-25) of your testimony. Is this the capital structure you propose for EWM?

PSC-124

Regarding: Debt Issuance and Reacquisition Fees
Witness:

a. Are debt issuance and reacquisition costs typically included in a utility's embedded cost of debt?

b. In response to MCC-013 the joint applicants submitted a file which shows the inclusion of debt issuance costs in their proposed embedded cost of debt. Exhibits JDH-EWM-3 & JDH-CGB-3 illustrate the joint applicants' proposal to include debt issuance and reacquisition costs in rate base. In your opinion, is this "double dipping?" If so, in your opinion, what is the appropriate manner in which the joint applicants should seek to recover these costs?

c. Do the sample companies, upon which you base your proposed ratemaking capital structure, include these types of fees in their embedded cost(s) of debt?

PSC-125

Regarding: DCF Model
Witness: Hill

a. Is the DCF formula shown on page 20 of your testimony (lines 18-21) the formula you utilized in your DCF analysis summarized in Exhibit SGH-6?

b. Is the formula referenced in subpart (a) also often referred to as the Gordon Growth Model (developed by Professor Myron Gordon and referenced in Appendix B (page 2) of your testimony? Are the underlying assumptions in the Gordon Growth model the same as the assumptions made in the Dividend Discount Model (DDM) and Free Cash Flow to Equity (FCFE) DCF models?

c. Is the single-stage DCF model utilized by Mr. Scheig and referenced on page 48 of your testimony (line 1) the same as the model referenced in subparts (a) and (b) above?

d. Is the model referenced in subpart (a) the model you used in calculating the cost of equity capital as shown on page 42 of your testimony (line 21)?

e. Are DCF models predicated on the theory that the price of the stock is equal the discounted value of all future cash flows? Would those cash flows include dividends received as well as the sale of the stock?

PSC-126

Regarding: DCF Model
Witness: Hill

Please explain why you chose to employ the model referenced in subparts (a), (b), and (d) as your "primary" indication of the joint applicants' cost of equity capital as noted on page 42 of your testimony (line 22). Specifically, please address the reason for utilizing this method, as opposed to a non-constant growth or multi-stage DCF model, as your "primary" indicator of the cost of equity when this the underlying assumptions made in this model do not precisely "track" reality in the shorter term as noted on page 21 (line c.22) of your testimony.

PSC-127

Regarding: Earnings as a Proxy for Growth
Witness: Hill

a. Would you agree that in order to arrive at projected book value growth, analysts must first project earnings (ROE) and then apply a projected retention ratio to the earnings projections?

b. Would you agree that in order to arrive at projected growth in dividends, analysts must first project earnings (ROE) and then apply a projected dividend payout ratio to the earnings projections?

PSC-128

Regarding: Earnings
Witness: Hill

a. Would you agree that in order to arrive at projected book value growth, analysts must first project earnings (ROE) and then apply a projected retention ratio to the earnings projections?

b. Would you agree that in order to arrive at projected growth in dividends, analysts must first project earnings (ROE) and then apply a projected dividend payout ratio to the earnings projections?

PSC-129

Regarding: Sustainable Growth Rates
Witness: Hill

In this application, you utilize a constant-growth DCF model where “g” represents “sustainable growth rates.” The formula to calculate sustainable growth rates, found in Appendix B of your testimony (page 2), is shown as g=br + sv. As discussed on pages 1-3 and noted by equation (ii) (Appendix B), this formula has two components: 1) an internal growth rate component (br) and, 2) growth from external financing activity (sv).

You utilize this same "sustainable growth rate" formula in Docket D2017.9.79 – The Application of Montana-Dakota Utilities Co. for Authority to Establish Increased Rates for Gas Service in the State of Montana. In that docket, data request PSC-133 asked the following question regarding the "sv" component of your sustainable growth rate calculations:

"Since (v) essentially represents the percentage (fraction) of funds received from the sale of new stock (MP) that exceeds book value (BV) (i.e. accrues to the current shareholders, see (b) below), would you agree that in the determination of (s) it is necessary to account for the market-to-book ratio in addition to the share growth as (s) is intended to represent the increase in funds raised from the issuance of new shares as a percentage (fraction) of existing equity?"

Your response was:

"No. If the market-to-book ratio is constant, the growth in the number of shares outstanding will be equivalent to an increase in equity from the issuance of new shares. If, for example, the expected growth rate in the number of shares outstanding is 3% and the market price ($10/share) is twice book value ($5/share), and the number of shares outstanding at the beginning of the year is 100, and at the end of the year the number of shares outstanding is 103, the total market value common equity is $1,030 (103 shares x$10/share) and the total book value common equity is $515 (103 shares x$5/share). The growth rate in the number of shares and the growth rate in common equity as a percentage of existing equity (market value or book value), i.e., "the increase in funds raised from the issuance of new shares as a percentage (fraction) of existing equity," are all equal at 3%."

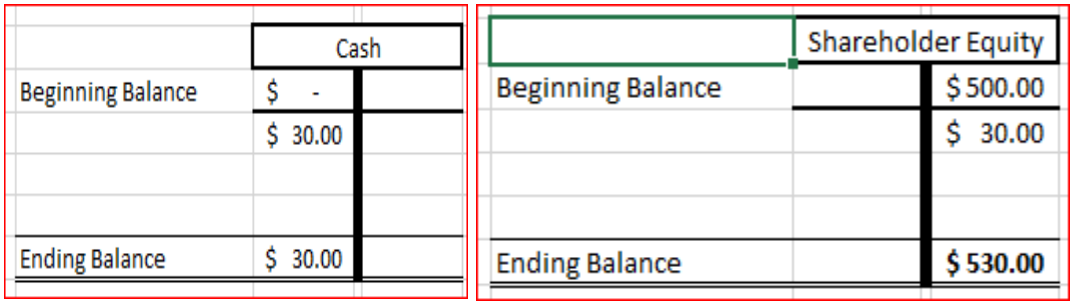
a. Please confirm that your response to DR PSC-133 (D2017.9.79) concludes that the hypothetical situation results in equivalent growth rates for both book value of shareholder equity and share growth.

b. Please address the alternative conclusion that while the number of shares increased 3%, the book value of shareholder equity (shareholder equity) increased at 6%, based on the following:

   1) The journal entry to record the issuance of the shares ((the market price is $10/share and the company issued 3 shares, therefore total funds received are $30) (Ending number of shares outstanding – Beginning shares outstanding = number of shares issued), 103-100=3))

	Debit	**Credit**
Cash	$ 30.00	
Shareholder Equity		$ 30.00

2) This journal entry effects the General Ledger as seen below (in T-Account format)



	Cash	
Beginning Balance	$ -	
	$ 30.00	
Ending Balance	$ 30.00	

		Shareholder Equity
Beginning Balance		$ 500.00
		$ 30.00
Ending Balance		$ 530.00

3) Thus, the book value of shareholder equity increased by 6% ($530(ending balance)-$500) (beginning balance)=$30, $30/$500 (beginning balance)=6% increase)while the number of shares only increased by 3%

c. In your response to subpart (b) of PSC-133, you go on to note:

"If, for example, the market-to-book ratio is 2.0 (book-to-market ratio is 0.5) and shares outstanding are expected to grow at 3%, "sv" will be 1.5% (sv=s(1-B/M)=3%(1-0.5)=1.5%). In that case, the internal expected growth rate (br) is increased by 1.5%. If the market-to-book ratio is 1.0, the "v" factor will be zero (1-B/M=1-1=0) and there will be no increase to the expected growth rate from the expected 3% increase in the shares outstanding. Please note also that the mathematical formula for "v" (1-B/M) is equivalently written as (1-(1/(M/B)). I use the latter in my analysis in order to use the market-to-book ratio of the sample companies, which is a more familiar variable than is the book-to-market ratio."

As you stated in response to DR PSC-133 (Docket D2017.9.79), "sv" results in a 1.5% growth rate using growth in number of shares outstanding as the value for "s". If you agree with the alternative conclusion in subpart b that, "sv" using total shareholder equity growth (6% as described above) as the value for "s" results in "sv" of 3% (sv=s(1-B/M))=6%(1-0.5)=3%), is this further supported by comparing the book value per share (BVPS) of common stock after the issuance to the BVPS prior to the issuance? That is, prior to the issuance was the BVPS $5 (total shareholder equity/number of shares outstanding) = ($500/100 =$5), and after the issuance is the BVPS $5.15 ($530/103=$5.15), which is a 3% increase (5.15-5.00=.15, .15/5.00=3%)? If not, please explain why.

Do your responses to subparts a-c indicate that by neglecting to account for the market-to-book ratio in the determination of growth in shareholder value that accretes to existing shareholders, "sv" effectively understates the actual growth achieved by the issuance of the additional shares? Furthermore, would you agree that, in the scenario described in parts a-c, calculating the entity's book value as a flat percentage (50%, as indicated by a book-to-market ratio of .5) of the fair market value of

shareholder equity, effectively understates the total shareholder equity of the company (i.e. the total book value of the company should be $530, but by calculating it as 50% of market capitalization you have determined it to be $515)? If so, is this result is a direct function of assuming the book value of shareholder equity holds steady at 50% (the book to market ratio) of the total market capitalization? Using the scenario above, you can see that the book value of shareholder equity increased 6%, while the market value of shareholder equity increased 3%. This results in your MTB ratio decreased to 1.94 (from 2.0). Pending market forces necessitating an equal adjustment to the market price of the stock, it is illogical to assume that the "market-to-book" ratio will hold constant after the issuance of the additional shares.

d. In subpart (c) of PSC-133 it was requested that you "recalculate the sustainable growth rates for each company identified in the exhibit utilizing the market-to-book ratio in your determination of (s)." Your reply can be seen below:

"I did not use the market-to-book ratio in his determination of the "s" variable as it is unnecessary. It is not clear to me how to "utilize" the market-to-book ratio in the determination of "s."

To illustrate how one would calculate "s" utilizing the market-to-book ratio, simply multiply the growth in shares (as a percentage) by the market-to-book ratio preceding the transaction. In our example above, this would be accomplished via the following formula:

Growth in shares 3%-the percentage growth in shares- calculated as the difference between the number of shares outstanding immediately after the issuance when compared to the number outstanding prior to the additional shares being issued. (103-100=3, 3/100=.03)

Market-to-book ratio 2.0- calculated at the market price per share divided by the book value per share immediately preceding the stock issuance ($10/$5=2).

s= 3% (growth in shares) * 2 (market to book ratio)
s= 6%

Please recalculate the "sv" component of your sustainable growth rates for all the sample group companies (identified in SGH-4 (page 1) utilizing the market-to-book ratio in your determination of (s). Using Atmos Energy as an example:

Company	br	+	sv=g*(1-(1/M/B))	=	g
ATO	5.75%		(6.78% * (1-(1/2.26)))		9.53%

e. Please update Exhibits SGH-4, SGH-6, and SGH-11 with the new, sustainable growth rates (identified as "g") for each sample group company.

PSC-130

Regarding: Representation regarding SGH-4, Page 1
Witness: Hill

On page 24 of your testimony (line 17) you represent that Exhibit (SGH-4) page 1 shows the simple 5-yr sustainable growth rate for Atmos (ATO) is 4.3%. Please identify where on this Exhibit (SGH-4) page 1, the 4.3% sustainable growth rate is shown.

PSC-131

Regarding: Market prices used in Exhibits SGH-5 & SGH-10
Witness: Hill

a. Please provide the trailing 1-year, 6 month, 3 month, and 1 month average market price(s) for each company in the sample group.

b. Please compare the average market prices you used in Exhibits SGH-3, and SGH-10 to the results shown in subpart (b). Additionally, please explain why you chose to use the December 15th, 2017 through January 30th, 2018 time period as the basis for determining your average market prices used in your dividend yield calculations as opposed to any of the time periods referenced in subpart (b).

PSC-132

Regarding: Market-to-book ratio's
Witness: Hill

Please identify where you obtained the Market-to-book ratios identified in Exhibit (SGH-4) page 1. If you calculated these ratios, please provide the calculations as well as the source data used in the calculations.

PSC-133

Regarding: MEPR analysis
Witness: Hill

Please perform 3 additional MEPR analyses in the same manner in which you performed your analysis shown in Exhibit SGH-10, using the trailing 6-, 3-, and 1-month averages (as calculated in PSC-131) for your market price and holding all other variables constant.

PSC-134

Regarding: SME Pipeline
Witness: Hill

Regarding the requested accounting treatment of the SME pipeline discussed on pages 45-47 of your testimony. In your opinion, what amount (if any), of the SME pipeline should be included in rate base?

PSC-135

Regarding: Size-Risk premium
Witness: Hill

a. On pages 48 of your testimony (lines 25-27) you argue that "Even if we accept, for the moment, the validity of a "size-risk" adjustment, the only cost of equity methodology to which that adjustment would be logically applied is a CAPM analysis based on a long-term historical market risk premium." Since returns for any given ROE can be determined by the price paid per share of stock (i.e. for any given achieved or expected return, the price paid by investors will reflect their required return), and the Duff & Phelps study indicates that, over the 1926-2016 for a given return, investors paid lower prices per share for "small" company stocks, compared to "large" company stocks (thus resulting in a higher return or "premium" based solely on the size of the company). Irrespective of the particular model used in determining the cost of equity please explain why (disregarding the fact that Duff & Phelps results are "historical" in nature), if determined that a size-risk adjustment is indeed valid, it is inappropriate to apply this adjustment to any given cost of equity, regardless of the method utilized in determining the ROE, when it can be determined that a company is indeed "small" (as measured by its market capitalization).

b. On page 50 of your testimony, you reference a study and provide an excerpt that concludes "the findings suggest that there is no need to adjust for the firm size in utility regulation." To the best of your knowledge, have there been other studies (publications) that corroborate these findings? If so, please references to the study and excerpts illustrating the corroboration. Also, are you aware of any studies that result in findings which contradict the findings of this study? If so, please provide references to the study and excerpts illustrating the contradictory findings.

PSC-136

Regarding: Risk Premium Critique (pages 70-73)
Witness: Hill

On page 70 of your testimony (lines 20-28) you note that there are two fundamental tenets, upon which risk-premium analyses are based, which, when further examined indicate that risk premium analyses should not be given primary consideration in arriving at a cost of equity capital. These “tenets” can be seen below:

i. They look backward in time, they assume “past is prologue.”

ii. Implicit in the use of an average historical risk premium of equities over debt is the assumption that the risk premium is constant over time.

a. Is the CAPM model a derivative (or variation) of risk-premium analyses?

b. Are both the "tenets" listed above common criticisms of the CAPM methodology?

c. Would you agree that Mr. Scheig attempts to remedy the backward-looking nature of risk-premium analyses by performing a linear regression analysis aimed at discovering a relationship between a dependent variable (the risk premium) and an independent variable (bond yields).

d. On page 73 of your testimony (lines 3-8), you note that a correlation coefficient of .92 between the bond yield and the risk premium is not surprising given that "the resultant risk premium is a direct arithmetic function of the prevailing bond yield." Would you agree that, in rate case proceedings, risk-premium type analyses are commonly used in estimating the cost of capital? If so, would the authorized ROE's Mr. Scheig uses in his regression analyses most likely reflect consideration of some sort of risk premium analysis?

PSC-137

Regarding: CAPM/Risk Premium
Witness: Hill

On pages 57-58 of your testimony you cite some sources which seem to indicate that Mr. Scheig's requested forward-looking MRP is excessive. One of these sources is a Duff & Phelps "Client Alert" that was published in October 2017. Another source is a monograph published by Professor Damodaran. A third is a textbook which was published in 2011. Pursuant to your testimony on page 57 (line 15) , the Duff & Phelps publication cited above relied upon Professor Damodaran's monograph in determining an estimated MRP. Therefore, one can reasonably conclude that Professor Damodaran's monograph was published prior to October 2017. Please provide, if available, more recent literature published after Feb 1, 2018 which would support the notion that the forward-looking MRP's identified in the sources noted above continue to be reflective of consensus forward-looking MRP estimates.

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a copy of the Data Requests PSC-110 through PSC-137 of the Montana Public Service Commission to the Montana Consumer Counsel issued on March 9, 2018 in Docket D2017.9.80 was served upon the following, by mailing a true and correct copy, via first class mail, on the 9th day of March, 2018, addressed as follows:

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