

MONTANA-DAKOTA UTILITIES CO.
BEFORE THE NORTH DAKOTA PUBLIC SERVICE COMMISSION
CASE NO. PU-22-194
PREPARED SURREBUTTAL TESTIMONY OF
ANN E. BULKLEY

1 **I. INTRODUCTION AND PURPOSE**

2 **Q1. Please state your name, affiliation and business address**

3 A1. My name is Ann E. Bulkley. I am a Principal with The Brattle Group (“Brattle”). My
4 business address is One Beacon Street, Suite 2600, Boston, Massachusetts 02108.

5 **Q2. On whose behalf are you submitting this testimony?**

6 A2. I am submitting this surrebuttal testimony before the North Dakota Public Service
7 Commission (“Commission”) on behalf of Montana-Dakota Utilities Co. My testimony
8 addresses the regulated electric utility operations of Montana-Dakota Utilities Co. within
9 North Dakota (“Montana-Dakota” or the “Company”).

10 **Q3. Did you previously submit direct and rebuttal testimony in this proceeding?**

11 A3. Yes. I previously submitted direct and rebuttal testimony regarding the appropriate return
12 on equity (“ROE”) and capital structure for Montana-Dakota in this proceeding.

13 **Q4. What is the purpose of your surrebuttal testimony?**

14 A4. The purpose of my testimony is to respond to the surrebuttal testimony of Dr. Marie Fagan
15 on behalf of the North Dakota Public Service Commission Advocacy Staff (“Staff”) as this
16 testimony relates to the just and reasonable ROE and the appropriate capital structure for

1 Montana-Dakota. The fact that I may not have responded to any particular argument or
2 statement does not indicate my agreement with that argument or statement.

3 **Q5. Are you sponsoring any exhibits as part of your surrebuttal testimony?**

4 A5. No.

5 **II. RESPONSE TO DR. FAGAN**

6 **Q6. What has Dr. Fagan stated regarding your rebuttal testimony?**

7 A6. Dr. Fagan largely reiterates the positions in her direct testimony, and specifically disagrees
8 with my rebuttal testimony that:

- 9 • Reliance on a historical market risk premium is incorrect and that it fails to account
10 for current market conditions and the inverse relationship between interest rates
11 because she states that future market returns are notoriously difficult to forecast.¹
- 12 • She has inconsistently used two different risk-free rates in the CAPM model,
13 suggesting that she has used a consistent time horizon for historical data when
14 considering the market return and risk-free rate, and that my approach ignores the
15 inverse relationship between market returns and the risk-free rate.²
- 16 • The use of multiple methodologies necessarily leads to a better estimate of required
17 ROE, since she contends that estimating the cost of equity using the DCF
18 methodology, which relies on projected earnings per share, lack accuracy and are
19 biased.³
- 20 • She failed to consider certain risks that may affect the ROE for the Company.⁴
- 21 • There should be an allowance for flotation costs.⁵

¹ Surrebuttal Testimony of Marie Fagan, March 21, 2023 (“Fagan Surrebuttal Testimony”), at 16.

² *Id.*, at 18-19.

³ *Id.*, at 19.

⁴ *Id.*, at 20.

⁵ *Id.*, at 20.

1 Dr. Fagan maintains that her recommended ROE of 9.42 percent is reasonable.⁶ She further
2 suggests that there are certain arguments in favor of a lower ROE but not higher.⁷

3 **Q7. What support does Dr. Fagan provide for her conclusion that the market return is**
4 **inversely related to the risk-free rate?**

5 A7. Dr. Fagan reviews historical return data for the S&P 500 and the yield on the 10-year
6 Treasury bond to conclude that the market return decreases as interest rates increase. For
7 example, Dr. Fagan asserts that from 1928 to 2022, in years where the yield on the 10-year
8 Treasury bond was 2.5 percent, the market risk premium was higher than 7 percent (*i.e.*,
9 implied market return of 9.5 percent) as compared to when interest rates were above 5
10 percent, the average market risk premium was -4.1 percent (*i.e.* implied market return of
11 0.9 percent).⁸

12 **Q8. Do you agree with the historical market return analysis conducted by Dr. Fagan?**

13 A8. No, I do not. Dr. Fagan has conflated actual returns in the market with the investor required
14 or cost of equity produced by the CAPM model. For example, as shown in Figure 4 of my
15 rebuttal testimony, in 2008, the market return was negative 37 percent, while the income-
16 only return on long-term government bonds as reported by *Kroll* was 4.45 percent.
17 According to the historical return analysis conducted by Dr. Fagan, at an interest rate of
18 4.45 percent, investors would require a return of negative 37 percent. This example
19 demonstrates that the relationship she suggests is clearly not correct. The 2008 annual
20 return on Large Company Stocks of negative 37 percent occurred during the Great

⁶ *Id.*, at 21.

⁷ *Id.*, at 21.

⁸ *Id.*, at 18-19.

1 Recession of 2008/09 when market volatility was very high. Given the increased risk and
2 uncertainty in the market, investors' return requirements would have increased
3 substantially. It is unreasonable to expect that investors required a negative market return
4 as is implied by Dr. Fagan's analysis.

5 **Q9. Dr. Fagan suggests that the use of a historical risk-free rate to estimate the market**
6 **risk premium and a projected long-term government bond yield in the CAPM is not**
7 **an error.⁹ Do you agree?**

8 A9. No. Dr. Fagan suggests that because her historical market risk premium reflects market
9 returns and treasury bond yields over the same historical period that there is no
10 inconsistency in her approach to the risk-free rate in the CAPM.¹⁰ However, Dr. Fagan
11 does not respond to the criticism that I raised in my rebuttal testimony; specifically that she
12 is relying on two different risk-free rates in the CAPM, which means that Dr. Fagan is
13 relying on a market risk premium that is not related to current market conditions. The
14 CAPM formula can be summarized as follows:

$$\text{Expected cost of equity} = \text{risk-free rate} + (\text{beta} * (\text{market return} - \text{risk-free rate}))$$

16 The portion of this formula that is the market return less the risk-free rate is the
17 market risk premium. It is clear from the formula that there is a single risk-free rate variable
18 that must be used. The fact that Dr. Fagan relied on a historical risk free rate and market
19 return based on the same historical period of data to estimate the market risk premium does
20 not resolve the inconsistency created when she adds a *projected* risk-free rate to the

⁹ *Id.*, at 18.

¹⁰ *Id.*, at 18.

1 historical market risk premium she has estimated using a historical risk-free rate. Dr. Fagan
2 relies on in the first component of the CAPM (*i.e.*, 3.69 percent) differs from the *historical*
3 average risk-free rate that she relies on for her market risk premium estimate (*i.e.*, 4.91
4 percent).

5 **Q10. Dr. Fagan reiterates her position that the constant growth DCF methodology does not**
6 **provide a reasonable estimate of the market return in the CAPM because projected**
7 **EPS growth rates lack accuracy and are biased. Has Dr. Fagan provided any new**
8 **evidence to support that position?**

9 A10. No. While Dr. Fagan reiterates her position that projected EPS estimates are biased and
10 overstated, she provides no new evidence to support her position. As I addressed in my
11 rebuttal testimony, this issue was addressed many years ago and a forward-looking market
12 risk premium has been relied on by the Federal Energy Regulatory Commission and
13 various other state utility regulators.

14 **Q11. Dr. Fagan suggests that the Chrétien and Coggins (2011) study¹¹ that you cited in**
15 **your rebuttal testimony supports her estimated market risk premium of 7.25 percent.**
16 **Do you agree?**

17 A11. No. As Dr. Fagan notes, the Chrétien and Coggins (2011) study found that two alternative
18 CAPM methodologies indicated an equity risk premium for natural gas utilities of between
19 4 percent and 8 percent. However, there are two issues that make Dr. Fagan's comparison
20 inapt.

¹¹ Chrétien, Stéphane, and Frank Coggins. "Cost Of Equity For Energy Utilities: Beyond The CAPM." *Energy Studies Review*, Vol. 18, No. 2, 2011.

1 First, it is inaccurate to compare the equity risk premium for *natural gas utilities* to the
2 market risk premium for the *market as a whole* such as Dr. Fagan has done. The risk of
3 utilities is less than the risk of the market as a whole as Dr. Fagan has acknowledged given
4 that she relies on an average beta for her proxy group of 0.79 in her CAPM analysis, which
5 indicates that the risk of the proxy group companies is lower than that of the overall market,
6 which has a beta of 1.0.

7 Second, the Chrétien and Coggins (2011) study was based on data from 1972 through 2006,
8 a period in which interest rates were substantially higher than they are currently. Therefore,
9 given the inverse relationship between interest rates and the market risk premium, and that
10 current interest rates are lower than the interest rates for the period used in the Chrétien
11 and Coggins (2011) study, the range of market risk premiums for utilities found in Chrétien
12 and Coggins (2011) to which Dr. Fagan attempts to compare her market risk premium
13 would be understated and not reflective of the current market conditions.

14 **Q12. Is it still your opinion that Dr. Fagan has failed to consider certain risks that may**
15 **affect the ROE?**

16 A12. Yes. While Dr. Fagan states that she evaluated a peer group of 26 companies with similar
17 risk to the Company, and that her beta estimate from that peer group analysis is reasonable,
18 she also suggests that there are reasons to believe that the beta she identified “could be
19 lower, not higher,” because the Company has one of the lowest financial leverage ratios in
20 the proxy group.¹² However, Dr. Fagan provides no analysis, exhibit, or other information
21 to support her claim that the Company has one of the lowest financial leverage ratios of

¹² Fagan Surrebuttal Testimony, at 20.

1 her proxy group. Furthermore, as discussed in my direct testimony, the Company is
2 proposing a projected equity ratio for 2022 of 50.787 percent and a proposed equity ratio
3 for 2023 of 50.810 percent. As shown in Exhibit No. ____ (AEB-2), Schedule 11, the
4 Company's proposed equity ratio for both 2022 and 2023 is lower than all but 4 of the 15
5 companies in my proxy group, thus indicating a greater than average financial risk – not
6 lower than average as suggested by Dr. Fagan – relative to the proxy group.

7 **Q13. In addition to financial risk, has Dr. Fagan considered any other risks of the Company**
8 **relative to the proxy group?**

9 A13. No. Dr. Fagan fails to note that the Company does not have a revenue decoupling
10 mechanism, while approximately half of the utility operating subsidiaries of my proxy
11 group companies have some form of revenue decoupling, which indicates that the
12 Company has greater than average regulatory risk relative to the proxy group.¹³

13 **Q14. Do you maintain your position that Dr. Fagan's recommended ROE for the Company**
14 **of 9.42% is not appropriate?**

15 A14. Yes. For the reasons discussed herein and in my previous testimonies, I maintain that Dr.
16 Fagan's recommended ROE of 9.42% is not appropriate. Dr. Fagan's recommended ROE
17 is based solely on the result of her CAPM analysis, which as discussed, improperly relies
18 on two different risk-free rates and reflects a market risk premium that fails to consider the
19 inverse relationship between interest rates and market risk premium. Moreover, to provide
20 context to Dr. Fagan's recommended ROE of 9.42 percent, Figure 1 shows the average
21 quarterly authorized ROEs for vertically-integrated electric utilities in the past that

¹³ Exhibit No. ____ (AEB-2), Schedule 9.

1 approximated Dr. Fagan's as compared to the quarterly average 30-year Treasury bond
 2 yield at that time.

3 **Figure 1: Comparison of Historical Interest Rate Levels and Authorized ROEs**
 4 **Relative to Current Market Conditions**

Quarter	Average Authorized ROE	Avg. 30-Yr. Treasury Bond Yield
Q3/2015	9.40%	2.96%
Q2/2016	9.48%	2.57%
Q1/2021	9.45%	2.07%
Q2/2021	9.47%	2.26%
Q1/2022	9.45%	2.25%
Q1/2023		3.75%

5

6 As shown, the 30-year Treasury bond yields ranged from 2.07 percent to 2.96 percent when
 7 the authorized ROEs were relatively close to Dr. Fagan's recommendation. However, as
 8 also shown, the average 30-year Treasury bond yield for Q1/2023 was 3.75 percent, or
 9 significantly greater than the interest rate levels when the authorized ROEs were closer to
 10 Dr. Fagan's recommendation. Therefore, this supports that Dr. Fagan's recommended
 11 ROE in this proceeding is understated.

12 **Q15. Does this conclude your surrebuttal testimony?**

13 A15. Yes.