

STATE OF NORTH DAKOTA  
BEFORE THE NORTH DAKOTA  
PUBLIC SERVICE COMMISSION

Case No. PU-17-\_\_\_

PREPARED DIRECT TESTIMONY OF

J. STEPHEN GASKE

ON BEHALF OF

MONTANA-DAKOTA UTILITIES CO.

1 **Q1. Please state your name, position and business address.**

2 A1. My name is J. Stephen Gaske and I am a Senior Vice President of Concentric  
3 Energy Advisors, Inc., 1300 19<sup>th</sup> Street NW, Suite 620, Washington, DC 20036.

4 **Q2. Would you please describe your educational and professional background?**

5 A2. I hold a B.A. degree from the University of Virginia and an M.B.A. degree with a  
6 major in finance and investments from George Washington University. I also  
7 earned a Ph.D. degree from Indiana University where my major field of study was  
8 public utilities and my supporting fields were finance and economics. A copy of  
9 my résumé is included as Attachment A to this testimony.

10 **Q3. Have you presented expert testimony in other proceedings?**

11 A3. Yes. I have filed testimony or testified in more than 100 regulatory proceedings  
12 in North America. These submissions have included testimony on the cost of capital  
13 and capital structure issues for electric and natural gas distribution and oil and  
14 natural gas pipeline operations before more than a dozen federal, state and

1 provincial regulatory bodies in the U.S., Canada and Mexico, including the North  
2 Dakota Public Service Commission (“Commission”). In addition, I have testified  
3 or submitted testimony on issues such as cost allocation, rate design, pricing,  
4 regulatory principles, market power, and generating plant economics before more  
5 than a dozen federal, state and provincial regulatory bodies in the U.S. and Canada.  
6 During the course of my consulting career, I have conducted many studies on issues  
7 related to regulated industries and have served as an advisor to numerous clients on  
8 economic, competitive, and financial matters. I also have spoken and lectured  
9 before many professional groups including the American Gas Association and the  
10 Edison Electric Institute Rate Fundamentals courses.

11 **I. INTRODUCTION**

12 A. Scope and Overview

13 **Q4. What is the scope of your testimony in this proceeding?**

14 A4. I have been asked by Montana-Dakota Utilities Co. (“Montana-Dakota” or the  
15 “Company”) to estimate the cost of common equity capital for the Company’s  
16 natural gas distribution operations in the state of North Dakota. In this testimony,  
17 I calculate a range for the cost of common equity capital for Montana-Dakota’s  
18 North Dakota natural gas distribution operations based on a Discounted Cash Flow  
19 (“DCF”) analysis of a group of proxy companies that have risks similar to those of  
20 Montana-Dakota’s North Dakota gas distribution operations. I then place the  
21 Company within the range of reasonableness established by the DCF analyses by  
22 comparing the risks of Montana-Dakota’s North Dakota natural gas distribution

1 operations to those of the proxy gas distribution companies and by considering  
 2 several alternative benchmark analyses.

3 **Q5. What rate of return is Montana-Dakota requesting in this proceeding?**

4 A5. Based on its test period capital structure, Montana-Dakota is requesting the  
 5 following rate of return for its North Dakota natural gas distribution operations:

6 **Table 1: Requested Rate of Return – North Dakota Gas Distribution Operations<sup>1</sup>**

Source	Percent	Cost	Overall Rate of Return
Long-Term Debt	43.036%	5.282%	2.273%
Short-term Debt	5.968%	2.831%	0.169%
Common Equity	50.996%	10.000%	5.100%
TOTAL	100.000%		7.542%

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8 As my testimony discusses, an overall allowed rate of return of 7.542 percent, with  
 9 a 10.0 percent return on common equity, represents the cost of capital for Montana-  
 10 Dakota’s North Dakota natural gas distribution operations at this time.

11 B. Company Background

12 **Q6. Please describe Montana-Dakota’s operations and those of its parent  
 13 company, MDU Resources Group, Inc.**

14 A6. Montana-Dakota is a wholly-owned division of MDU Resources Group, Inc.  
 15 (“MDU Resources”) that is engaged in the generation, transmission and distribution  
 16 of electricity and the distribution of natural gas in the states of Montana, North  
 17 Dakota, South Dakota, and Wyoming. MDU Resources also owns Cascade Natural

<sup>1</sup> Projected average capital structure and rate of return for 2018.

1 Gas Co., which distributes natural gas in the states of Oregon and Washington;  
2 Intermountain Gas Company, which distributes natural gas in the state of Idaho;  
3 and Great Plains Natural Gas Co., which distributes natural gas in western  
4 Minnesota and southeastern North Dakota.

5 Through other divisions and subsidiaries, MDU Resources is engaged in utility  
6 infrastructure construction services, natural gas gathering and transmission, and  
7 construction services and contracting.

8 Natural gas distribution assets comprised 33.4 percent<sup>2</sup> of MDU Resources' total  
9 assets in 2016, and natural gas distribution revenues comprised 18.6 percent<sup>3</sup> of  
10 total operating revenues. North Dakota accounted for 13.0 percent of the natural  
11 gas distribution operating sales revenues, while Idaho (34.0 percent), Washington  
12 (26.0 percent), Montana (8.0 percent), Oregon (8.0 percent), South Dakota (6.0  
13 percent), Minnesota (3.0 percent) and Wyoming (2.0 percent) accounted for the  
14 other 87.0 percent of retail gas distribution operating sales revenues.<sup>4</sup>

15 **Q7. Would you please describe Montana-Dakota's North Dakota natural gas**  
16 **distribution service territory?**

17 A7. As discussed in the testimony of Company witness Nicole A. Kivisto, Montana-  
18 Dakota provides natural gas distribution service in North Dakota to approximately  
19 109,000 customers in 74 communities, operating approximately 110,000 service  
20 lines and 2,575 miles of distribution mains. The customer base in North Dakota is

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<sup>2</sup> MDU Resources Group, 2016 SEC Form 10-K, at 81.

<sup>3</sup> *Ibid.*, at 80.

<sup>4</sup> *Ibid.*, at 12.

1 86 percent residential customers and 14 percent commercial, industrial and  
2 transportation customers.<sup>5</sup> Outside of Bismarck, Montana-Dakota's service  
3 territory in North Dakota consists primarily of towns and small cities dotted  
4 throughout relatively sparsely populated areas. As such, the economy is heavily  
5 dependent on providing retail and other services for surrounding agricultural,  
6 mining and petroleum production areas, and several cities are heavily dependent on  
7 military bases or government employment.

8 **Q8. What is your understanding of the factors that are driving this rate case filing**  
9 **by Montana-Dakota?**

10 A8. Company witness Kivisto explains that the primary reasons for the filing are  
11 increased investment in distribution facilities to improve system safety and  
12 reliability and the depreciation and taxes associated with the increase in investment.  
13 Ms. Kivisto testifies that Montana-Dakota's gross investment projected for 2018 in  
14 North Dakota gas distribution operations is \$275 million, or nearly 18 percent  
15 greater than the gross investment from the 2015 test year used in the last rate case.

16 **II. FINANCIAL MARKET STUDIES**

17 A. Criteria for a Fair Rate of Return

18 **Q9. Please describe the criteria which should be applied in determining a fair rate**  
19 **of return for a regulated company.**

20 A9. The United States Supreme Court has provided general guidance regarding the level

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<sup>5</sup> Montana-Dakota Utilities Company, Annual Report, State of North Dakota, Gas Operations, For the Year Ended December 31, 2016, at 7.

1 of allowed rate of return that will meet constitutional requirements. In *Bluefield*  
2 *Water Works & Improvement Company v. Public Service Commission of West*  
3 *Virginia* (262 U.S. 679, 693 (1923)), the Court indicated that:

4 The return should be reasonably sufficient to assure confidence in  
5 the financial soundness of the utility, and should be adequate, under  
6 efficient and economical management, to maintain and support its  
7 credit and enable it to raise the money necessary for the proper  
8 discharge of its public duties. A rate of return may be reasonable at  
9 one time and become too high or too low by changes affecting  
10 opportunities for investment, the money market, and business  
11 conditions generally.

12 The Court has further elaborated on this requirement in its decision in *Federal*  
13 *Power Commission v. Hope Natural Gas Company* (320 U.S. 591, 603 (1944)).

14 There the Court described the relevant criteria as follows:

15 From the investor or company point of view, it is important that  
16 there be enough revenue not only for operating expenses, but also  
17 for the capital costs of the business. These include service on the  
18 debt and dividends on the stock.... By that standard, the return to  
19 the equity owner should be commensurate with returns on  
20 investments in other enterprises having corresponding risks. That  
21 return, moreover, should be sufficient to assure confidence in the  
22 financial integrity of the enterprise, so as to maintain its credit and  
23 to attract capital.

24 Thus, the standards established by the Court in *Hope* and *Bluefield* consist of three  
25 requirements. These are that the allowed rate of return should be:

- 26 1. commensurate with returns on enterprises with corresponding  
27 risks;
- 28 2. sufficient to maintain the financial integrity of the regulated  
29 company; and
- 30 3. adequate to allow the company to attract capital on reasonable  
31 terms.

1           These legal criteria will be satisfied best by employing the economic concept of the  
2           “cost of capital” or “opportunity cost” in establishing the allowed rate of return on  
3           common equity. For every investment alternative, investors consider the risks  
4           attached to the investment and attempt to evaluate whether the return they expect  
5           to earn is adequate compensation for the risks undertaken. Investors also consider  
6           whether there might be other investment opportunities that would provide a better  
7           return relative to the risk involved. This weighing of alternatives and the highly  
8           competitive nature of capital markets causes the prices of stocks and bonds to adjust  
9           in such a way that investors can expect to earn a return that is just adequate for the  
10          risks involved. Thus, for any given level of risk, there is a return that investors  
11          expect in order to induce them to voluntarily undertake that risk and not invest their  
12          money elsewhere. That return is referred to as the “opportunity cost” of capital or  
13          “investor required” return.

14       **Q10. How should a fair rate of return be evaluated from the standpoint of**  
15       **consumers and the public?**

16       A10. The same standards should apply. When an unregulated entity faces competition,  
17       the pressure of that competition and consumer choices will combine to determine  
18       the fair rate of return. However, when regulation is appropriate, consumers and the  
19       public have a long-term interest in seeing that the regulated company has an  
20       opportunity to earn returns that are not so high as to be excessive, but that also are  
21       sufficient to encourage continued replacement and maintenance, as well as needed  
22       expansions, extensions, and new services. Thus, both the consumer and the public  
23       interest depend on establishing a return that will readily attract capital without being

1 excessive.

2 **Q11. How are the costs of long-term debt determined?**

3 A11. For purposes of setting regulated rates, the current embedded costs of long-term  
4 debt are used in order to ensure that the company receives a return that is sufficient  
5 to pay the interest obligations that are attached to this source of capital.

6 **Q12. How is the cost of common equity determined?**

7 A12. The practice in setting a fair rate of return on common equity is to use the current  
8 market cost of common equity in order to ensure that the return is adequate to attract  
9 capital and is commensurate with returns available on other investments with  
10 similar levels of risk. However, determining the market cost of common equity is  
11 a relatively complicated task that requires analysis of many factors and some degree  
12 of judgment by an analyst. The current market cost of capital for securities that pay  
13 a fixed level of interest or dividends is relatively easy to determine. For example,  
14 the current market cost of debt for publicly-traded bonds can be calculated as the  
15 yield-to-maturity, adjusted for flotation costs, based on the current market price at  
16 which the bonds are selling. In contrast, because common stockholders receive  
17 only the residual earnings of the company, there are no fixed contractual payments  
18 which can be observed. This uncertainty associated with the dividends that  
19 eventually will be paid greatly complicates the task of estimating the cost of  
20 common equity capital. For purposes of this testimony, I have relied on several  
21 analytical approaches for estimating the cost of common equity. My primary  
22 approach relies on two DCF analyses. In addition, I have conducted two types of

1 risk premium analyses, a market DCF analysis of the S&P 500, and a Capital Asset  
2 Pricing Model (“CAPM”) analysis as benchmarks to assess the reasonableness of  
3 the DCF results. Each of these approaches is described later in this testimony.

4 B. Interest Rates and the Economy

5 **Q13. What are the general economic factors that affect the cost of capital?**

6 A13. Companies attempting to attract common equity must compete with a variety of  
7 alternative investments. Prevailing interest rates and other measures of economic  
8 trends influence investors’ perceptions of the economic outlook and its implications  
9 on both short- and long-term capital markets. Page 1 of Schedule 1 of Exhibit  
10 No. \_\_\_(JSG-2) shows various general economic statistics. Real growth in Gross  
11 Domestic Product (“GDP”) has averaged 2.6 percent annually during the past 30  
12 years, 2.3 percent for the past 20 years, and 1.3 percent for the past 10 years. After  
13 increasing at an annual rate of 2.1 percent in the fourth quarter of 2016, the Bureau  
14 of Economic Analysis reported that the “second” estimate for the first quarter of  
15 2017 was a real annual economic growth rate of 1.2 percent.<sup>6</sup> According to Blue  
16 Chip Economic Indicators, the consensus forecast for expected growth in real GDP  
17 is 2.2 percent in 2017<sup>7</sup> and 2.4 percent in 2018.<sup>8</sup> Likewise, the U.S. unemployment  
18 rate has improved in recent months to 4.3 percent for May 2017,<sup>9</sup> but the labor force  
19 participation rate for civilians 16 years and over was at 62.7 percent for May 2017,  
20 remaining near the lowest rate since the late 1970s.<sup>10</sup> Improvements in the U.S.

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<sup>6</sup> U.S. Department of Commerce, Bureau of Economic Analysis, News Release, May 27, 2017.

<sup>7</sup> Blue Chip Economic Indicators, Vol. 42, No. 6, June 10, 2017, at 2.

<sup>8</sup> *Ibid.*, at 3.

<sup>9</sup> U.S. Department of Labor, Bureau of Labor Statistics, News Release, June 2, 2017, at 1.

<sup>10</sup> *Ibid.*, at 2.

1 unemployment rate contributed to the Federal Reserve’s decision in June 2017 to  
2 raise its target range for the federal funds rate to a range between 1.00 – 1.25 percent  
3 for overnight loans to banks.<sup>11</sup>

4 In October 2014, the Federal Open Market Committee (“FOMC”) ended its  
5 Quantitative Easing program, which provided extraordinary monetary stimulus for  
6 the U.S. economy for several years through asset purchases of mortgage-backed  
7 securities and Treasury bonds. However, the Federal Reserve’s accommodative  
8 policy continues today. Specifically, in May the FOMC noted, “[the FOMC’s]  
9 policy, by keeping the Committee’s holdings of longer-term securities at sizable  
10 levels, should help maintain accommodative financial conditions.”<sup>12</sup> But, in June  
11 the FOMC announced a contemplated end to accommodative monetary policies  
12 later this year by gradually reducing the Federal Reserve’s securities holdings by  
13 decreasing reinvestment of principal payments from those securities.<sup>13</sup> This new  
14 policy will begin to put upward pressure on interest rates by reducing the funds  
15 available in the market. According to the July 2017 issue of Blue Chip Financial  
16 Forecasts, approximately 81 percent of economists surveyed expect the Federal  
17 Reserve will begin to shrink the size of its balance sheet in the second half of  
18 2017.<sup>14</sup>

19 In addition to the stated expectations of the FOMC, leading economists and market  
20 analysts are expecting additional increases in interest rates in the short and medium

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<sup>11</sup> Statement of the Federal Open Market Committee, June 14, 2017.

<sup>12</sup> Statement of the Federal Open Market Committee, May 3, 2017.

<sup>13</sup> Statement of the Federal Open Market Committee, June 14, 2017.

<sup>14</sup> Blue Chip Financial Forecasts, Vol. 36, No. 7, July 1, 2017, at 14.

1 term. The July 2017 issue of Blue Chip Financial Forecasts surveyed market  
2 participants concerning their views regarding the magnitude and timing of future  
3 increases in short-term rates by the Federal Reserve. In response to the question  
4 regarding how much more the Federal Reserve will raise interest rates in 2017, 85  
5 percent of those surveyed by Blue Chip expect an additional increase of 25 basis  
6 points and 9 percent expect an additional increase of 50 basis points.<sup>15</sup> In response to  
7 the same question for 2018, 22 percent of those surveyed expect a total increase in  
8 short-term interest rates of 50 basis points in 2018, 44 percent expect a total increase  
9 of 75 basis points, and 30 percent expect a total increase of 100 basis points. The  
10 average yield on the 30-year U.S. Treasury bond in May 2017 was 2.96 percent.  
11 By contrast, the Blue Chip consensus estimate projects that the average yield on the  
12 30-year U.S. Treasury bond will increase to 4.30 percent for the period from 2019  
13 through 2023.<sup>16</sup> Thus, the consensus estimate from leading economists is for an  
14 increase of 134 basis points in U.S. Treasury bond yields over the next several  
15 years.

16 As pages 2 and 3 of Schedule 1 of Exhibit No. \_\_\_(JSG-2) show, interest rates on  
17 longer-term U.S. Treasury bonds and A-rated and Baa-rated public utility bonds  
18 have increased substantially since August 2016. For example, between August  
19 2016 and May 2017, the average yield on 30-year U.S. Treasury bonds increased  
20 from 2.26 percent to 2.96 percent, the average yield on A-rated public utility bonds

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<sup>15</sup> Blue Chip Financial Forecasts, Vol. 36, No. 7, July 1, 2017, at 14.

<sup>16</sup> Blue Chip Financial Forecasts, Vol. 36, No. 6, June 1, 2017, at 14.

1 increased from 3.59 percent to 4.12 percent, and the average yield on Baa-rated  
2 public utility bonds increased from 4.20 percent to 4.50 percent.

3 Investors also are influenced by both the historical and projected level of inflation.  
4 As also shown on Page 1 of Schedule 1 of Exhibit No. \_\_\_\_ (JSG-2), during the past  
5 decade, the Consumer Price Index has increased at an average annual rate of 1.8  
6 percent and the GDP Implicit Price Deflator, a measure of price changes for all  
7 goods produced in the United States, has increased at an average rate of 1.6 percent.  
8 According to Blue Chip Economic Indicators, the Consumer Price Index is  
9 forecasted to increase by 2.3 percent<sup>17</sup> and 2.2 percent<sup>18</sup> for 2017 and 2018,  
10 respectively. Over the intermediate and longer-term, however, investors can expect  
11 higher inflation rates as the Federal Reserve's accommodative monetary policy,  
12 which began in 2008, places upward pressure on consumer and producer prices  
13 once economic growth returns to historical levels.

14 **Q14. How are current economic conditions reflected in the equity markets?**

15 A14. The equity markets have recovered from the large stock market decline in 2008 and  
16 2009, but the Federal Reserve's massive purchases of federal debt and mortgage-  
17 backed securities have created artificially low interest rates on government bonds  
18 and a potential stock market valuation bubble that increases the risks in the equity  
19 market.

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<sup>17</sup> Blue Chip Economic Indicators, Vol. 42, No. 6, June 10, 2017, at 2.

<sup>18</sup> *Ibid.*, at 3.

1 C. Discounted Cash Flow (“DCF”) Method

2 **Q15. Please describe the DCF method of estimating the cost of common equity**  
3 **capital.**

4 A15. The DCF method reflects the assumption that the market price of a share of  
5 common stock represents the discounted present value of the stream of all future  
6 dividends that investors expect the firm to pay. The DCF method suggests that  
7 investors in common stocks expect to realize returns from two sources: a current  
8 dividend yield plus expected growth in the value of their shares as a result of future  
9 dividend increases. Estimating the cost of capital with the DCF method, therefore,  
10 is a matter of calculating the current dividend yield and estimating the long-term  
11 future growth rate in dividends that investors reasonably expect from a company.

12 The dividend yield portion of the DCF method utilizes readily-available  
13 information regarding stock prices and dividends. The market price of a firm’s  
14 stock reflects investors’ assessments of risks and potential earnings as well as their  
15 assessments of alternative opportunities in the competitive financial markets. By  
16 using the market price to calculate the dividend yield, the DCF method implicitly  
17 recognizes investors’ market assessments and alternatives. However, the other  
18 component of the DCF formula, investors’ expectations regarding the future long-  
19 run growth rate of dividends, is not readily apparent from stock market data and  
20 must be estimated using informed judgment.

21 **Q16. What is the appropriate DCF formula to use in this proceeding?**

22 A16. There can be many different versions of the basic DCF formula, depending on the

1 assumptions that are most reasonable regarding the timing of future dividend  
 2 payments. In my opinion, it is most appropriate to use a model that is based on the  
 3 assumptions that dividends are paid quarterly and that the next annual dividend  
 4 increase is a half year away. One version of this quarterly model assumes that the  
 5 next dividend payment will be received in three months, or one quarter. This model  
 6 multiplies the dividend yield by  $(1 + 0.75g)$ . Another version assumes that the next  
 7 dividend payment will be received today. This model multiplies the dividend yield  
 8 by  $(1 + 0.5g)$ . Since, on average, the next dividend payment is a half quarter away,  
 9 the average of the results of these two models is a reasonable approximation of the  
 10 average timing of dividends and dividend increases that investors can expect from  
 11 companies that pay dividends quarterly. The average of these two quarterly  
 12 dividend models is:

$$K = \frac{D_0(1 + 0.625g)}{P} + g$$

13  
 14  
 15 Where:  $K =$  the cost of capital, or total return that investors expect to  
 16 receive;  
 17  $P =$  the current market price of the stock;  
 18  $D_0 =$  the current annual dividend rate; and  
 19  $g =$  the future annual growth rate that investors expect.

20 In my opinion, this is the DCF model that is most appropriate for estimating the  
 21 cost of common equity capital for companies that pay dividends quarterly, such as  
 22 those used in my analysis.

1 D. Flotation Cost Adjustment

2 **Q17. Does the investor return requirement that is estimated by a DCF analysis need**  
3 **to be adjusted for flotation costs in order to estimate the cost of capital?**

4 A17. Yes. There are significant costs associated with issuing new common equity  
5 capital, and these costs must be considered in determining the cost of capital.  
6 Schedule 2 of Exhibit No. \_\_\_(JSG-2) shows a representative sample of flotation  
7 costs incurred with 34 new common stock issues by natural gas distribution  
8 companies since January 2004. Flotation costs associated with these new issues  
9 averaged 4.09 percent.

10 This indicates that in order to be able to issue new common stock on reasonable  
11 terms, without diluting the value of the existing stockholders' investment,  
12 Montana-Dakota's North Dakota natural gas distribution operations must have an  
13 expected return that places a value on its equity that is approximately 4.0 percent  
14 above book value. The cost of common equity capital is therefore the investor  
15 return requirement multiplied by 1.04.

16 One purpose of a flotation cost adjustment is to compensate common equity  
17 investors for past flotation costs by recognizing that their real investment in the  
18 company exceeds the equity portion of the rate base by the amount of past flotation  
19 costs. For example, the proxy companies generally have incurred flotation costs in  
20 the past and, thus, the cost of capital invested in these companies is the investor  
21 return requirement plus an adjustment for flotation costs. A more important  
22 purpose of a flotation cost adjustment is to establish a return that is sufficient to

1 enable a company to attract capital on reasonable terms. This fundamental  
2 requirement of a fair rate of return is analogous to the well-understood basic  
3 principle that a firm, or an individual, should maintain a good credit rating even  
4 when they do not expect to be borrowing money in the near future. Regardless of  
5 whether a company can confidently predict its need to issue new common stock  
6 several years in advance, it should be in a position to do so on reasonable terms at  
7 all times without dilution of the value of the existing investors' common equity.  
8 This requires that the flotation cost adjustment be applied to the entire common  
9 equity investment and not just a portion of it.

10 E. DCF Study of Natural Gas Distribution Companies

11 **Q18. Would you please describe the overall approach used in your DCF analysis of**  
12 **Montana-Dakota's cost of common equity for its North Dakota natural gas**  
13 **distribution operations?**

14 A18. Because Montana-Dakota's North Dakota natural gas distribution operations must  
15 compete for capital with many other potential projects and investments, it is  
16 essential that the Company have an allowed return that matches returns potentially  
17 available from other similarly risky investments. The DCF method generally  
18 provides a good measure of the returns required by investors in the financial  
19 markets. However, the DCF method requires a market price of common stock to  
20 compute the dividend yield component. Since Montana-Dakota is a division of  
21 MDU Resources and does not have publicly-traded common stock, a direct, market-  
22 based DCF analysis of Montana-Dakota's North Dakota natural gas distribution  
23 operations as a stand-alone company is not possible. As an alternative, I have used

1 a group of natural gas distribution companies that have publicly-traded common  
2 stock as a proxy group for purposes of estimating the cost of common equity for  
3 Montana-Dakota's North Dakota natural gas distribution operations.

4 **Q19. How did you select a group of natural gas distribution proxy companies?**

5 A19. I started with the eleven companies that The Value Line Investment Survey ("Value  
6 Line") classifies as Natural Gas Utilities to ensure that the company is considered  
7 to be primarily engaged in the natural gas distribution business and that retention  
8 growth rate projections are available. From that group, I eliminated any companies  
9 that did not have investment-grade credit ratings from either Standard & Poor's  
10 ("S&P") or Moody's Investors Service ("Moody's") because such companies are  
11 not sufficiently comparable in terms of business and financial risk to Montana-  
12 Dakota. In addition, I excluded any companies that did not pay dividends, or that  
13 did not have future growth rate estimates provided by either Zacks or Thomson  
14 First Call, or that were currently engaged in significant mergers or acquisitions. In  
15 order to ensure that the companies are primarily engaged in the natural gas  
16 distribution business, I eliminated any companies that did not derive at least 65  
17 percent of their operating income from regulated natural gas distribution operations  
18 in 2016, or that did not have at least 65 percent of their total assets devoted to the  
19 provision of natural gas distribution service in 2016. As shown on page 1 of  
20 Schedule 3 of Exhibit No. \_\_\_(JSG-2), seven companies met these criteria for  
21 inclusion in the proxy group.

1 **Q20. How did you calculate the dividend yields for the companies in your proxy**  
2 **group?**

3 A20. These calculations are shown on pages 1-2 of Schedule 4 of Exhibit No. \_\_\_(JSG-  
4 2). For the price component of the calculation, I used the average of the high and  
5 low stock prices for each month during the six-month period from November 2016  
6 through April 2017. The average monthly dividend yields were calculated for each  
7 proxy group company by dividing the prevailing annualized dividend for the period  
8 by the average of the stock prices for each month. These dividend yields were then  
9 multiplied by the quarterly DCF model factor  $(1 + 0.625g)$  to arrive at the projected  
10 dividend yield component of the DCF model.

11 **Q21. Please describe the method you used to estimate the future growth rate that**  
12 **investors expect from this group of companies.**

13 A21. There are many methods that reasonably can be employed in formulating a growth  
14 rate estimate, but an analyst must attempt to ensure that the end result is an estimate  
15 that fairly reflects the forward-looking growth rate that investors expect. I  
16 developed two different DCF analyses of the proxy companies. In the first  
17 approach, I conducted a Basic DCF analysis that relied on analysts' earnings  
18 forecasts for the growth rate component of the model. My second approach used a  
19 combination of the analysts' earnings growth projections and "sustainable growth"  
20 rate forecasts calculated from Value Line data (based on growth from earnings  
21 retention and stock issuances) to produce a Blended Growth Rate Analysis.

1 F. Basic DCF Analysis

2 **Q22. How did you estimate the expected future growth rate in your Basic DCF**  
3 **analysis?**

4 A22. In my Basic DCF analysis, I have estimated expected future growth based on long-  
5 term earnings per share growth rate forecasts of investment analysts, which are an  
6 important source of information regarding investors' growth rate expectations.  
7 This Basic DCF analysis assumes that the analysts' earnings growth forecasts  
8 incorporate all information required to estimate a long-term expected growth rate  
9 for a company. I have used the consensus estimates of earnings growth forecasts  
10 published by Zacks Investment Research and Thomson First Call (as reported on  
11 Yahoo! Finance) as the sources for analysts' forecasts in my calculations. As  
12 shown on page 2 of Schedule 4 of Exhibit No. \_\_\_(JSG-2), the average of the  
13 analysts' long-term earnings growth rate estimates for the natural gas distribution  
14 proxy companies is 5.86 percent, and the median is 6.00 percent.

15 **Q23. How did you calculate the cost of capital using the Basic DCF analysis?**

16 A23. These calculations are shown on page 5 of Schedule 4 of Exhibit No. \_\_\_(JSG-2).  
17 Again, the annual dividend yield is multiplied by the quarterly dividend adjustment  
18 factor  $(1 + 0.625g)$ , and this product is added to the growth rate estimate to arrive  
19 at the investor-required return. Then, the investor return requirement is multiplied  
20 by the flotation cost adjustment factor, 1.04, to arrive at the Basic DCF estimate of  
21 the cost of common equity capital for the proxy companies. The Basic DCF  
22 analysis indicates a cost of common equity for the proxy companies in a range from  
23 7.11 percent to 11.84 percent. In this analysis, the median for the group is 9.22

1 percent and the third quartile is 10.22 percent.

2 G. Blended Growth Rate Analysis

3 **Q24. How did you use your Blended Growth Rate Analysis to estimate investors'**  
4 **long-term growth rate expectations for the proxy companies?**

5 A24. The Blended Growth Rate approach combines: (i) Sustainable growth rates based  
6 on Value Line retention growth rate forecasts (B\*R), plus earnings accretion from  
7 new shares (S\*V); and (ii) consensus estimates of long-term earnings growth for  
8 each company from various investment analysts, as published by Zacks and  
9 Thomson First Call

10 **Q25. What approach did you use in calculating the expected long-term retention**  
11 **growth rate?**

12 A25. The long-term retention growth rate component is based on the calculation of  
13 retention growth rates using Value Line forecasts for each company.

14 **Q26. Please describe the retention growth rate component of your analysis.**

15 A26. I have relied upon Value Line projections of the retention growth rates that the  
16 proxy companies are expected to begin maintaining three to five years in the future.  
17 Although companies may experience extended periods of growth for other reasons,  
18 in the long-run, growth in earnings and dividends per share depends in part on the  
19 amount of earnings that is being retained and reinvested in a company. Thus, the  
20 primary determinants of growth for the proxy companies will be (i) their ability to  
21 find and develop profitable opportunities; (ii) their ability to generate profits that  
22 can be reinvested in order to sustain growth; and, (iii) their willingness and

1 inclination to reinvest available profits. Expected future retention rates provide a  
2 general measure of these determinants of expected growth, particularly items (ii)  
3 and (iii).

4 **Q27. How can a company's earnings retention rate affect its future growth?**

5 A27. Retention of earnings causes an increase in the book value per share and, other  
6 factors being equal, increases the amount of earnings that is generated per share of  
7 common stock. The retention growth rate can be estimated by multiplying the  
8 expected retention rate (*B*) by the rate of return on common equity (*R*) that a  
9 company is expected to earn in the future. For example, a company that is expected  
10 to earn a return of 12 percent and retain 75 percent of its earnings might be expected  
11 to have a growth rate of 9 percent, computed as follows:

12 
$$0.75 \times 12\% = 9\%$$

13 On the other hand, another company that is also expected to earn 12 percent but  
14 only retains 25 percent of its earnings might be expected to have a growth rate of 3  
15 percent, computed as follows:

16 
$$0.25 \times 12\% = 3\%$$

17 Thus, the rate of growth in a firm's book value per share is primarily determined  
18 by the level of earnings and the proportion of earnings retained in the company.

19 **Q28. How can a company increase its earnings per share and future dividends by**  
20 **issuing new common stock?**

21 A28. Firms can grow through external financing by issuing new shares to investors and

1 investing the proceeds to earn a return. If the new equity funds are invested to earn  
2 the same rate of return as the existing equity, and the market price per share (M) is  
3 greater than the book value per share (B), this source of financing can increase  
4 earnings per share so that the earnings of existing shareholders is increased. The  
5 amount of growth from external share issuances is represented as:

$$6 \quad \text{Growth from new issuances} = S * V$$

7 Where:

8 S = the annual percentage increase in common equity from stock issuances;

9 V = the portion of the stock issuance that increases the book value of existing  
10 shareholders;

$$11 \quad = 1 - (B/M).$$

12 **Q29. How did you calculate the expected future sustainable growth rates of the**  
13 **proxy companies?**

14 A29. For most companies, Value Line publishes forecasts of data that can be used to  
15 estimate the retention rates that its analysts expect individual companies to have  
16 three to five years in the future. Since these retention rates are projected to occur  
17 several years in the future, they should be indicative of a normal expectation for a  
18 primary underlying determinant of growth that would be sustainable indefinitely  
19 beyond the period covered by analysts' forecasts. While companies may have  
20 either accelerating or decelerating growth rates for extended periods of time, the  
21 retention growth rates expected to be in effect three to five years in the future  
22 generally represent a minimum "cruising speed" that companies can be expected to  
23 maintain indefinitely. The derivation of Value Line's retention growth rate  
24 forecasts for each of the proxy companies is shown on page 3 of Schedule 4 of

1 Exhibit No.\_\_(JSG-2). The projected earnings per share and projected dividends  
2 per share can be used to calculate the percentage of earnings per share that is being  
3 retained and reinvested in the company. This earnings retention rate is multiplied  
4 by the projected return on common equity to arrive at the B\*R portion of the  
5 projected sustainable growth rate. It is also necessary to account for projected  
6 earnings growth derived from issuing new shares by the proxy group companies.  
7 This is calculated, by multiplying growth in equity from issuing new shares (S)  
8 times the portion of new equity that accrues to existing shareholders (V). The S\*V  
9 portion of the projected sustainable growth rates for each of the proxy companies  
10 are also shown on page 3 of Schedule 4 of Exhibit No.\_\_(JSG-2). The average  
11 sustainable growth rate, (B\*R) + (S\*V), for the proxy companies is 5.38 percent,  
12 and the median is 5.08 percent.

13 **Q30. How did you utilize the analysts' projected earnings growth rates and the**  
14 **projected sustainable earnings growth rates in estimating expected growth for**  
15 **the proxy companies in the Blended Growth Rate Analysis?**

16 A30. As shown on page 4 of Schedule 4 of Exhibit No.\_\_(JSG-2), I calculated a  
17 weighted average of the analysts' projected earnings growth rates and the  
18 sustainable growth rates to derive long-term growth rate estimates for each of the  
19 proxy companies. In these calculations, I gave two-thirds weighting to the analysts'  
20 earnings growth rate projections and one-third weighting to the projected  
21 sustainable growth rates. The average of the blended growth rates for the proxy  
22 companies is 5.70 percent, and the median is 5.92 percent.

1 **Q31. How did you utilize these Blended Growth Rate estimates in estimating the**  
2 **return on common equity capital that investors require from the proxy**  
3 **companies?**

4 A31. These calculations are shown on page 6 of Schedule 4 of Exhibit No. \_\_\_(JSG-2).  
5 Again, the annual dividend yield for each company is multiplied by the quarterly  
6 dividend adjustment factor ( $1 + 0.625g$ ), and this product is added to the growth  
7 rate estimate to arrive at the investor-required return. Finally, the investor return  
8 requirement is multiplied by the flotation cost adjustment factor, 1.04, to arrive at  
9 the cost of common equity capital for the proxy companies. This Blended Growth  
10 Rate Analysis indicates that the cost of common equity capital for the natural gas  
11 distribution proxy companies is in a range between 7.85 percent and 10.75 percent.  
12 In this analysis, the median for the group is 9.13 percent and the third quartile is  
13 9.64 percent.

14 **Q32. Earlier you discussed the fact that the Federal Reserve Board has been setting**  
15 **interest rates and monetary policy in a way that artificially depresses yields on**  
16 **U.S. Treasury debt. What does this mean for the cost of common equity for**  
17 **gas distribution companies using the DCF model?**

18 A32. The DCF cost of equity results for regulated gas distribution companies are being  
19 affected by artificial factors in the current and projected capital markets, including  
20 the following two key factors: (1) the Federal Reserve's continuing accommodative  
21 monetary policy; (2) and the market's expectation for substantially higher interest  
22 rates.

1 Rising interest rates historically have had a negative effect on stock prices,  
2 especially for dividend paying stocks such as utilities. As interest rates increase,  
3 the return on gas utility equities may be less attractive to investors as compared  
4 with other investments of comparable risk. The market's expectation for rising  
5 interest rates suggests that the calculated cost of equity for the proxy companies  
6 using current market data is likely to be an artificially depressed estimate of  
7 investors' required return at this time. For example, in two recent decisions, the  
8 FERC expressed concern that Federal Reserve actions may have artificially reduced  
9 current dividend yields for utilities and the results of the DCF model may not be  
10 representative of the true cost of capital at this time.<sup>19</sup>

11 H. Risk Premium Analysis

12 **Q33. Have you conducted additional analysis in determining the cost of equity**  
13 **capital for Montana-Dakota?**

14 A33. Yes. The risk premium approach provides a general guideline for determining the  
15 level of returns that investors expect from an investment in common stocks.  
16 Investments in the common stocks of companies carry considerably greater risk  
17 than investments in bonds of those companies since common stockholders receive  
18 only the residual income that is left after the bondholders have been paid. In  
19 addition, in the event of bankruptcy or liquidation of the company, the  
20 stockholders' claims on the assets of a company are subordinate to the claims of  
21 bondholders. This priority standing provides bondholders with greater assurances

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<sup>19</sup> Opinion No. 531, 147 FERC ¶ 61,234 (2014); aff'd in Opinion No. 531-B, 150 FERC ¶ 61,165 (March 3, 2015); and Opinion No. 551, 156 FERC, ¶ 61,234 (Sept. 28, 2016), para. 120-122.

1 that they will receive the return on investment that they expect and that they will  
2 receive a return of their investment when the bonds mature. Accompanying the  
3 greater risk associated with common stocks is a requirement by investors that they  
4 can expect to earn, on average, a return that is greater than the return they could  
5 earn by investing in less risky bonds. Thus, the risk premium approach estimates  
6 the return investors require from common stocks by utilizing current market data  
7 that is readily available in bond yields and adding to those yields a premium for the  
8 added risk of investing in common stocks.

9 Investors' expectations for the future are influenced to a large extent by their  
10 knowledge of past experience. Duff & Phelps annually publishes extensive data  
11 regarding the returns that have been earned on stocks, bonds and U.S. Treasury bills  
12 since 1926. Historically, the annual return on large company common stocks has  
13 exceeded the return on long-term corporate bonds by a premium of 570 basis points  
14 (5.7 percent) per year from 1926-2016.<sup>20</sup> When this premium is added to the  
15 average yield on Moody's corporate bonds in recent months of approximately 4.2  
16 percent<sup>21</sup>, the result is an investor return requirement for large company stocks of  
17 approximately 9.9 percent. However, investors in smaller companies expect higher  
18 returns over the long term, due to the additional business and financial risks that  
19 smaller companies face. According to Duff & Phelps, companies in the same size  
20 range as Montana-Dakota's North Dakota natural gas distribution operations have

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<sup>20</sup> Duff & Phelps Valuation Handbook, 2017 U.S. Guide to Cost of Capital, Exhibit 2.3. Calculation: (12.0 percent – 6.3 percent = 5.7 percent)

<sup>21</sup> Exhibit No. \_\_\_(JSG-2), Schedule 1, at 3. The average yield on Moody's corporate bonds from November 2016 through April 2017 has been 4.24 percent.

1 had a premium of 1,400 basis points (14.0 percent) over the average return on long-  
 2 term corporate bonds.<sup>22</sup> When added to the recent average corporate bond yield,  
 3 this size-related premium suggests an expected return of 18.2 percent. This analysis  
 4 indicates that the rate of return that I am proposing in this proceeding would be low  
 5 relative to the historic risk premiums earned by similarly-sized unregulated  
 6 companies.

7 **Q34. Did you also perform a risk premium analysis that is specific to the natural**  
 8 **gas distribution industry?**

9 A34. Yes, I did. Research studies provide empirical support for the proposition that  
 10 equity risk premia generally increase as interest rates decrease, and vice versa. In  
 11 fact, the data provided in Schedule 5, Exhibit No. \_\_\_(JSG-2) produce statistical  
 12 results that are consistent with existing research in this area. Using this data, I  
 13 performed a linear regression to estimate the relationship between 30-year U.S.  
 14 Treasury bonds and the risk premium required for regulated gas distribution  
 15 companies. The resulting equation is presented in Schedule 5, Exhibit No. \_\_ (JSG-  
 16 2) and re-created below:

17 
$$\text{Intercept} + \text{Coefficient} \times \text{Bond Yield} = \text{Risk Premium}$$

18 
$$0.08410 + (- 0.5560 \times \text{Bond Yield}) = \text{Risk Premium}$$

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<sup>22</sup> Duff & Phelps Valuation handbook, 2017 U.S. Guide to Cost of Capital, Exhibit 4.1. Duff & Phelps defines size ranges based on market capitalization. I calculated the implied market capitalization for Montana-Dakota's North Dakota natural gas distribution operations based on the Company's pro forma rate base (\$135.450 million) and the projected average equity ratio for 2018 (51.00 percent). This places Montana-Dakota's North Dakota natural gas distribution operations in Duff & Phelps' tenth decile. Calculation: 20.3 percent – 6.3 percent = 14.0 percent.

1 The regression statistics indicate that this equation is statistically significant and the  
2 R-square reveals that approximately 80 percent of the variation in the risk premium  
3 is explained by the bond yield. The negative coefficient in the above equation  
4 demonstrates the inverse relationship between bond yields and the risk premium.  
5 For every change of 100 basis points in the bond yield, the risk premium changes  
6 by approximately 56 basis points in the opposite direction.

7 This Risk Premium analysis was conducted using three different risk-free rates: (1)  
8 the current average yield on 30-year Treasury bonds; (2) the near-term projected  
9 yields on 30-year Treasury bonds in 2017 and 2018; and (3) the longer-term  
10 projected yields on 30-year Treasury bonds from 2019-2023. Based on these three  
11 interest rates, the regression equation produces an average ROE estimate of 9.96  
12 percent.

13 I. Market DCF Analysis

14 **Q35. What other analysis did you conduct in determining the cost of equity capital**  
15 **for Montana-Dakota's North Dakota natural gas distribution operations?**

16 A35. For an additional benchmark of the reasonableness of my DCF results, I calculated  
17 the current required return for the companies contained in the S&P 500 Index.  
18 Using data provided by the Bloomberg Professional service, I performed a market  
19 capitalization-weighted DCF calculation on the S&P 500 companies based on the  
20 current dividend yields and long-term growth rate estimates as of April 28, 2017.  
21 These calculations are shown in Schedule 6 of Exhibit No. \_\_\_(JSG-2). The current  
22 secondary market required ROE for the S&P 500 is 12.54 percent. This analysis

1 demonstrates that the rate of return that I am proposing in this proceeding is low  
2 relative to the return required by investors who invest in the S&P 500.

3 J. Forward-Looking CAPM

4 **Q36. Many analysts would argue that gas distribution companies are less risky than**  
5 **the S&P 500 companies. Does this make the S&P 500 a poor benchmark for**  
6 **evaluating the DCF results?**

7 A36. No. The DCF required return for the S&P 500 is significantly greater than the DCF  
8 estimates for the natural gas distribution company proxy group, and the large  
9 magnitude of this difference is an indicator that the proxy company DCF results  
10 may be on the low side. Some analysts use the CAPM to adjust for differences in  
11 risk between the market average and a particular group of proxy companies. While  
12 I do not consider the CAPM to be a reliable measure of the cost of capital, one  
13 could use it to adjust the S&P 500 results to achieve a risk-adjusted benchmark for  
14 the natural gas distribution company proxy group. For example, Beta is frequently  
15 used as the measure of relative risk in the CAPM. As shown on Schedule 7 of Exhibit  
16 No. \_\_\_(JSG-2), the average beta reported by Value Line for the proxy companies is  
17 0.73.

18 Duff & Phelps recommends making a size adjustment to the CAPM results to  
19 reflect the differential in investors' return requirements for smaller and larger  
20 companies, as measured by market capitalization. On Schedule 8, page 2 of 2, of  
21 Exhibit No. \_\_\_(JSG-2), I calculated the CAPM size premium for the proxy  
22 companies using the Duff & Phelps size premium data. The average size

1 adjustment for my proxy group companies is 128 basis points. As shown on  
2 Schedule 8, page 1 of 2, of Exhibit No.\_\_\_\_(JSG-2), using the Value Line beta  
3 estimates and the Duff & Phelps adjustments for CAPM size bias for my proxy  
4 companies, the median unbiased CAPM result for my proxy companies is 11.26  
5 percent.

6 Thus, if one were to use the CAPM as a benchmark of a reasonable return, this  
7 benchmark demonstrates that my recommended ROE of 10.0 percent in this  
8 proceeding is reasonable.<sup>23</sup>

9 K. Relative Risk Analysis

10 **Q37. Have you compared the risks faced by Montana-Dakota's North Dakota**  
11 **natural gas distribution operations with the risks faced by the proxy group of**  
12 **companies?**

13 A37. Yes. There are four broad categories of risk that concern investors. These include:

- 14 1. Business Risk;  
15 2. Regulatory Risk;  
16 3. Financial Risk; and,  
17 4. Market Risk.

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<sup>23</sup> This CAPM calculation is identical to the one adopted by the U.S. Federal Energy Regulatory Commission. *Martha Coakley, et al. v. Bangor Hydro-Electric Company, et al.*, Opinion No. 531, 147 FERC ¶ 61,234 (2014); *aff'd* in Opinion No. 531-B, 150 FERC ¶ 61,165 (March 3, 2015); and *ABATE, et al. v. MISO, et al.*, Opinion No. 551, 156 FERC, ¶ 61,234 (Sept. 28, 2016), para. 120-122. Note that FERC used the CAPM only as a benchmark, but set the allowed rate of return above the median indicated by a DCF analysis of proxy companies because of the current abnormal financial market conditions. While Opinion No. 531 was recently remanded to the FERC by the D.C. Circuit Court, the Court's decision did not question the finding by the FERC that capital market conditions were anomalous.

1 **Q38. Please describe the business risks inherent in the natural gas distribution**  
2 **industry.**

3 A38. Business risk refers to the ability of the firm to generate revenues that exceed its  
4 cost of operations. Business risk exists because forecasts of both demand and costs  
5 are inherently uncertain. Markets change and the level of demand for the firm's  
6 output may be sufficient to cover its costs at one time and later become insufficient.  
7 Sunk investments in long-lived natural gas distribution assets, for which cost  
8 recovery occurs over a period of thirty years or more, are subject to enormous  
9 uncertainties and risks that demand, costs, supply, and competition may change in  
10 ways that adversely affect the value of the investment.

11 **Q39. What are some of the business risks faced by Montana-Dakota's North Dakota**  
12 **natural gas distribution operations?**

13 A39. The Company's natural gas distribution operations in North Dakota face many of  
14 the same business risks that are associated with other natural gas distribution  
15 companies. However, Montana-Dakota's North Dakota natural gas distribution  
16 operations face some particular risks that distinguish the Company from the proxy  
17 group of distribution companies, including its smaller size, slower customer growth  
18 in its service territory, and economic uncertainty associated with the sharp decline  
19 in oil prices that has affected the Company's service territory.

20 As shown on page 1 of Schedule 3 of Exhibit No. \_\_\_(JSG-2), Montana-Dakota's  
21 North Dakota natural gas distribution operations are significantly smaller than the  
22 operations of any of the proxy companies and a fraction of the size of the typical

1 proxy company. For example, the 2018 test year adjusted rate base of Montana-  
2 Dakota's North Dakota natural gas distribution operations is equal to only 2.4  
3 percent of the fiscal year-end 2016 total assets of the median proxy company.  
4 Similarly, Montana-Dakota's North Dakota natural gas distribution 2018 test year  
5 requested operating revenues and operating income are only 6.3 percent and 5.1  
6 percent of the year-end 2016 level for the median proxy company, respectively.  
7 Thus, depending upon the measure of size, the typical proxy company is  
8 somewhere between 16 and 41 times the size of Montana-Dakota's North Dakota  
9 natural gas distribution operations. The Company's smaller size has significant  
10 implications for business risks. Duff & Phelps has documented the significantly  
11 higher returns that generally have been associated with small companies.

12 With its relatively small revenue base, Montana-Dakota's North Dakota natural gas  
13 distribution operations are subject to greater risk that a major employer or industry,  
14 such as a government facility, agricultural processing facilities, or petroleum  
15 industry, might contract or close. Events such as these could significantly affect  
16 overall employment and income in the cities and towns served. Factors that  
17 negatively influence the local economy can reduce demand for Montana-Dakota's  
18 North Dakota natural gas distribution service and adversely impact investments in  
19 facilities used to provide those services.

20 **Q40. Please discuss how local economic conditions affect the business risk of**  
21 **Montana-Dakota's North Dakota gas distribution operations.**

22 A40. There is significant economic uncertainty in the Company's service territory due to

1 the sharp decline in oil prices that has occurred over the past few years, which has  
2 contributed to slower customer growth, especially in the regions outside Bismarck,  
3 and an increase in late payments. As discussed above, the smaller size of Montana-  
4 Dakota's North Dakota gas distribution operations makes the Company particularly  
5 vulnerable to the loss of larger customers or the downsizing of facilities.

6 **Q41. In the 2014 rate case settlement, Montana-Dakota was allowed to implement**  
7 **straight fixed-variable rates for its North Dakota residential gas distribution**  
8 **customers. Does this rate design reduce the Company's risk profile relative to**  
9 **the proxy group?**

10 A41. No. Because the ROE recommendation is established for a company based on its  
11 risk profile relative to the proxy group, it is necessary to consider whether the  
12 companies in the proxy group also have a comparable form of volumetric risk  
13 protection. Schedule 9 of Exhibit No. \_\_\_(JSG-2) shows that 66.7 percent of the  
14 operating utilities held by the proxy companies have some form of volumetric risk  
15 protection (e.g., revenue decoupling mechanisms, straight fixed-variable rate  
16 design, formula rate plans). On that basis, Montana-Dakota's volumetric risk is  
17 similar to that of the majority of the operating utility companies held by the proxy  
18 group companies. Thus, no adjustment to the authorized return on equity capital  
19 for that factor is necessary.

20 **Q42. How do Montana-Dakota's risks compare with those of the proxy companies?**

21 A42. Considering only its smaller size, Montana-Dakota's North Dakota natural gas  
22 distribution operations might require a return that is approximately 100 basis points

1 higher than the return required for the typical proxy company. In addition, the  
2 Company's operations are concentrated in smaller towns and cities with local  
3 economies that are generally less diversified than those of the proxy companies. In  
4 summary, Montana-Dakota's North Dakota natural gas distribution operations are  
5 riskier than the operations of the proxy companies.

6 **Q43. What are the regulatory risks faced by Montana-Dakota's North Dakota**  
7 **natural gas utility operations?**

8 A43. Regulatory risk is closely related to business risk and might be considered just  
9 another aspect of business risk. To the extent that the market demand for a natural  
10 gas distribution company's services is sufficiently strong that the company could  
11 conceivably recover all of its costs, regulators may nevertheless set the rates at a  
12 level that will not allow for full cost recovery. In effect, the binding constraint on  
13 natural gas distribution companies is often posed by regulation rather than by the  
14 working of market forces. One purpose of regulation is to provide a substitute for  
15 competition where markets are not workably competitive. As such, regulation often  
16 attempts to replicate the type of cost discipline and risks that might typically be  
17 found in highly competitive industries.

18 Moreover, there is the perceived risk that regulators may set allowed returns so low  
19 as to effectively undermine investor confidence and jeopardize the ability of natural  
20 gas distribution companies to finance their operations. Thus, in some instances,  
21 regulation may substitute for competition and in other instances it may limit the  
22 potential returns available to successful competitors. In either case, regulatory risk

1 is an important consideration for investors and has a significant effect on the cost  
2 of capital for all firms in the natural gas distribution industry.

3 The regulatory environment can significantly affect both the access to, and cost of  
4 capital in several ways. As noted by Moody's, "[f]or rate-regulated utilities, which  
5 typically operate as a monopoly, the regulatory environment and how the utility  
6 adapts to that environment are the most important credit considerations."<sup>24</sup>

7 Moody's further noted that:

8 Utility rates are set in a political/regulatory process rather than a  
9 competitive or free-market process; thus, the Regulatory Framework  
10 is a key determinant of the success of utility. The Regulatory  
11 Framework has many components: the governing body and the  
12 utility legislation or decrees it enacts, the manner in which  
13 regulators are appointed or elected, the rules and procedures  
14 promulgated by those regulators, the judiciary that interprets the  
15 laws and rules and that arbitrates disagreements, and the manner in  
16 which the utility manages the political and regulatory process. In  
17 many cases, utilities have experienced credit stress or default  
18 primarily or at least secondarily because of a break-down or obstacle  
19 in the Regulatory Framework – for instance, laws that prohibited  
20 regulators from including investments in uncompleted power plants  
21 or plants not deemed "used and useful" in rates, or a disagreement  
22 about rate-making that could not be resolved until after the utility  
23 had defaulted on its debts.<sup>25</sup>

24 Regulatory Research Associates ("RRA") ranks the North Dakota Public Service  
25 Commission as Average / 1, which is one notch above average on the nine-point  
26 scale.<sup>26</sup> This RRA ranking suggests that the Company provides natural gas  
27 distribution service in a regulatory environment that is somewhat more constructive

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<sup>24</sup> Moody's Investors Service, *Regulated Electric and Gas Utilities*, December 23, 2013, at 9.

<sup>25</sup> *Ibid.*

<sup>26</sup> Regulatory Research Associates, North Dakota Commission Profile, accessed June 13, 2017.

1 than average from an investor perspective. As such, Montana-Dakota's North  
2 Dakota natural gas distribution operations should be considered to have slightly  
3 below average regulatory risk.

4 **Q44. Would you please describe the relative financial risks for Montana-Dakota's**  
5 **North Dakota natural gas distribution operations?**

6 A44. Financial risk exists to the extent that a company incurs fixed obligations in  
7 financing its operations. These fixed obligations increase the level of income which  
8 must be generated before common stockholders receive any return and serve to  
9 magnify the effects of business and regulatory risks. Fixed financial obligations  
10 also increase the probability of bankruptcy by reducing the company's financial  
11 flexibility and ability to respond to adverse circumstances. One possible indicator  
12 of investors' perceptions of relative financial risk in this case might be obtained  
13 from credit ratings.

14 Page 2 of Schedule 3 of Exhibit No. \_\_\_(JSG-2) shows the credit ratings assigned  
15 by S&P and Moody's to each of the companies in the comparison group and to  
16 MDU Resources, Inc., the parent company of Montana-Dakota. The median S&P  
17 credit rating for companies in the proxy group is A-. By comparison, MDU  
18 Resources' long-term issuer rating from S&P is BBB+. This suggests that the  
19 perceived business and financial risk of MDU Resources' bonds is slightly higher  
20 than that of the typical company in the comparison group.

21 The capital structure data on Schedule 10 of Exhibit No. \_\_\_(JSG-2) show that  
22 Montana-Dakota's filed common equity ratio of 51.00 percent is similar to the

1 49.84 percent median for the proxy companies as of March 31, 2017, suggesting  
2 average financial risk. However, MDU Resources' below-average credit rating  
3 suggests that a higher common equity ratio would be required to offset Montana-  
4 Dakota's above-average business risks.

5 **Q45. Would you please describe Montana-Dakota's market risks?**

6 A45. Market risk is associated with the changing value of all investments because of  
7 business cycles, inflation, and fluctuations in the general cost of capital throughout  
8 the economy. Different companies are subject to different degrees of market risk  
9 largely as a result of differences in their business and financial risks. Overall, the  
10 market risk of Montana-Dakota's North Dakota natural gas distribution operations  
11 is comparable to that of the companies in the proxy group.

12 **Q46. How do the overall risks of the proxy companies compare with the risks faced**  
13 **by Montana-Dakota's North Dakota natural gas distribution operations?**

14 A46. Montana-Dakota's North Dakota natural gas distribution operations face overall  
15 risks that are above the median relative to those of the proxy companies. Montana-  
16 Dakota has above-average business risks due primarily to its small size relative to  
17 the proxy companies and its exposure to economic uncertainty in its service  
18 territory due to the sharp decline in oil prices and the resulting effect on customer  
19 growth and employment. Montana-Dakota has average financial risk relative to the  
20 proxy group, and somewhat below-average regulatory risk.

21 The greater business risk leads me to conclude that investors appraise the overall  
22 risks of Montana-Dakota's North Dakota natural gas distribution operations to be

1 above average relative to the risks of the proxy companies. Consequently,  
 2 Montana-Dakota's North Dakota natural gas distribution business requires an  
 3 allowed rate of return that is significantly above the median of the range for the  
 4 companies in the proxy group indicated by my DCF analyses.

### 5 **III. SUMMARY AND CONCLUSIONS**

6 **Q47. Please summarize the results of your cost of capital study.**

7 A47. I conducted two DCF analyses on a group of natural gas distribution companies  
 8 that have a range of risks that is roughly comparable to those of Montana-Dakota's  
 9 North Dakota natural gas distribution operations. These results are summarized as  
 10 follows:

11 **Table 2: Summary of DCF Results**

	Basic DCF Analysis	Blended Growth Rate DCF Analysis
High	11.84%	10.75%
3 <sup>rd</sup> Quartile	10.22%	9.64%
Median	9.22%	9.13%
1 <sup>st</sup> Quartile	7.82%	8.01%
Low	7.11%	7.85%

12  
 13 In addition, I conducted two risk premium analyses, a market DCF analysis of the  
 14 S&P 500, and a size-adjusted CAPM analysis to test the reasonableness of my DCF  
 15 analyses. Those results are summarized as follows:

1

**Table 3: Benchmark Risk Premium and Market DCF Analyses**

	Return
Risk Premium (Long-Term Corporate Bonds)	
vs. Large Company Stocks	9.9%
vs. Small Company Stocks	18.2%
Gas Utility Risk Premium (Regression of Authorized ROEs against 30-yr Treasury yields)	10.0%
Market DCF (S&P 500)	12.5%
Forward-Looking CAPM	11.3%

2

3 My risk premium, market DCF and size-adjusted CAPM analyses suggest that the  
4 median DCF results generally are low relative to current market benchmarks. In  
5 particular, the median DCF return estimates are considerably below the 10.0  
6 percent gas utility risk premium return. Similarly, the median DCF estimates for  
7 the natural gas distribution proxy companies are well below the 12.5 percent market  
8 DCF estimate for the S&P 500 companies and the 11.3 percent size-adjusted CAPM  
9 estimate for the natural gas distribution proxy companies.

10 **Q48. What rate of return on common equity do you recommend for Montana-**  
11 **Dakota's North Dakota natural gas distribution operations in this proceeding?**

12 A48. My analyses indicate that an appropriate rate of return on common equity for  
13 Montana-Dakota's North Dakota natural gas distribution operations at this time is  
14 10.0 percent, which is between the median and the third quartile of the range for  
15 my Basic DCF analysis, lower than my size-adjusted CAPM analysis, and equal to  
16 my Gas Utility Risk Premium analysis. This recommended return reflects my  
17 assessment that the overall risks of Montana-Dakota's North Dakota natural gas

1 distribution operations are above average relative to those of the proxy companies,  
2 and the fact that the median DCF results appear to be low relative to the other  
3 benchmarks at this time. Although the Company has average financial risk relative  
4 to the proxy companies, it has above average business risks. In addition to its very  
5 small size relative to the proxy companies, Montana-Dakota's North Dakota natural  
6 gas distribution operations are faced with significant economic uncertainty due to  
7 the sharp decline in oil prices that has occurred in recent years. Thus, an allowed  
8 rate of return equal to the average utility risk premium (10.0 percent) in my study  
9 is appropriately positioned to reflect the risks faced by Montana-Dakota's North  
10 Dakota natural gas distribution operations relative to the risks faced by the proxy  
11 companies, and also to reflect current conditions in the financial market.

12 **Q49. Does this conclude your Prepared Direct Testimony?**

13 A49. Yes.

**J. Stephen Gaske, Ph.D.**  
**Senior Vice President**

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Steve Gaske has more than 30 years of experience as an economic consultant, researcher, and professor in the fields of public utility economics, finance, and regulation. Dr. Gaske has provided consulting services in more than 300 regulatory, antitrust, tax, and civil proceedings. In addition, he has presented expert testimony in more than 100 state, provincial, and federal regulatory commission hearings in Canada, the U.S. and Mexico.

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**AREAS OF EXPERTISE**

His specialty is the application to regulated industries of inter-related principles from economics, finance and regulatory theory. His areas of expertise include:

- Finance, cost of capital, and risk analysis;
- Rate design, cost allocation, cost of service, and pricing of services;
- Energy markets and the economics of public utilities and energy infrastructure;
- Competition and antitrust principles; and
- Regulatory economics, rules, and policies.

**INDUSTRY EXPERTISE**

His work has involved:

- Most of the major natural gas pipelines in North America;
- Many electric utilities;
- Many natural gas distribution companies;
- Several major oil pipelines;
- Railroads;
- Postal Service;
- Telephone and satellite telecommunications companies; and
- Sewer and water companies.

**REPRESENTATIVE PROJECT EXPERIENCE**

Some of the projects on which Dr. Gaske has worked include:

- Advisor to numerous U.S. and Canadian pipelines on economics, pricing strategies and regulatory matters;
- Development of computerized cost of service models for calculating both traditional and levelized rates for gas and oil pipelines, and rates for electric utilities;
- On behalf of a new, greenfield pipeline designed to carry Canadian gas to U.S. New England markets he served as the rate and financial advisor during the development, permitting and financing stages.

- A variety of White Papers on technical aspects of calculating the allowed rate of return for regulated companies, including white papers submitted in proceedings involving FERC generic rate of return for electric utilities, FERC rate of return for gas and oil pipelines, Canadian rate of return for pipelines and utilities;
- An analysis of the applicability of various finance theories to telephone ratemaking by the U. S. Federal Communications Commission;
- A study of the economic structure, risks and cost of capital of the satellite telecommunications industry;
- Author of several issues of the H. Zinder & Associates Summary of Natural Gas Pipeline Rates;
- Several studies of regional natural gas market competition, market power, pricing and capacity needs;
- An evaluation of Federal Energy Regulatory Commission policies designed to promote liquidity in the natural gas commodity markets;
- Numerous studies of electric rate, regulatory and market issues such as canceled plant treatment, time-differentiated rates, non-utility generation, competitive bidding, and open-access transmission;
- Author of two updates of the Edison Electric Institute Glossary of Electric Utility Terms;
- Several studies of pricing, contract provisions, competitive bidding programs, and transmission practices for independent electric generation; and,
- Several reports and projects on incentive regulation and the application of price cap regulation to both electric and natural gas companies.

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## LITIGATION SUPPORT AND EXPERT TESTIMONY

Dr. Gaske has testified or filed testimony or affidavits in more than 100 regulatory proceedings on the following topics:

<b>Commission</b>	<b>Topic</b>
Alaska Regulatory Commission	Oil Pipeline Rate of Return/Rate Base
Alberta Energy and Utilities Board	Gas Pipeline Cost Allocation/Rate Design
Alberta Utilities Commission	Utility Cost of Capital; Gas Pipeline Contracts and Market Power
Colorado Board of Assessment Appeals	Property Tax Discount Rate
U.S. Economic Regulatory Administration	Gas Distribution Rate Design
U. S. Federal Energy Regulatory Commission	Electric Transmission Rate of Return; Gas Pipeline Cost Allocation and Rate Design; Rate of Return and

	Capital Structure; Competition; Revenue Requirements; Oil Pipeline Rate of Return and Pricing
Idaho Public Utilities Commission	Gas Distribution Rate of Return
Indiana Utilities Regulatory Commission	Electric Cost Allocation/Rate Design
Iowa Utilities Board	Electric Avoided Costs/Externalities
Maine Public Utilities Commission	Electric Rate Design/Demand Management
Comision Reguladora de Energia de México	Gas Pipeline Rate of Return
Montana Public Service Commission	Electric/Gas Distribution Rate of Return; Electric Cost Allocation and Rate Design
Minnesota Public Utilities Commission	Gas Distribution Rate of Return
National Energy Board of Canada	Gas Pipeline Cost Allocation and Rate Design; Oil Pipeline Service Structure and Rates
New Mexico Regulatory Commission	Electric Rate of Return
New York Public Service Commission	Gas Pipeline Capital Structure
New Brunswick Energy and Utilities Board	Gas Distribution Ratemaking
North Dakota Public Service Commission	Electric/Gas Distribution Rate of Return; Natural Gas Market Pricing; Electric Cost Allocation and Rate Design
Nova Scotia Utility and Review Board	Cost Allocation and Pricing of Bridge Access
Ontario Energy Board	Rate of Return; Access to and Pricing of Gas Pipeline Expansions; LNG Regulation
U.S. Postal Rate Commission	Postal Pricing/Rate Design
Régie de l'énergie du Québec	Rate of Return/Regulatory Principles
South Dakota Public Utilities Commission	Gas Distribution Rate of Return
Texas Public Utilities Commission	Electric Cost Allocation and Rate Design
Texas Railroad Commission	Gas Pipeline Cost Allocation/Rate Design
Washington Utilities and Transportation Comm.	Gas Distribution Rate of Return
Wisconsin Public Service Commission	Electric Generation Economics

Wyoming Public Service Commission

Electric/Gas Distribution Rate of Return

Wyoming Board of Equalization

Property Tax Discount Rate

## **TEACHING/SPEAKING ENGAGEMENTS**

Dr. Gaske has spoken on utility finance and economic issues before numerous professional groups. From 1983-1986, he served as Coordinator of the Edison Electric Institute Electric Rate Fundamentals Course. He has lectured on marginal cost estimation for electric utilities at the EEI rate course, and on both low-income rates and natural gas pipeline cost allocation and rate design before the American Gas Association Gas Rate Fundamentals Course. In addition, Dr. Gaske has taught college courses in Public Utility Economics, Transportation, Physical Distribution, Financial Management, Investments, Corporate Finance, and Corporate Financial Theory.

## **PROFESSIONAL HISTORY**

### CONSULTING

**Concentric Energy Advisors, Inc. (2008 – present)**

Senior Vice President

**H. Zinder & Associates (1988 – 2008)**

President/Senior Vice-President/Consultant

**Independent Consulting on Public Utility Issues (1982 - 1988)**

**Olson & Company, Inc. (1980 – 1981)**

Public Utility Consultant

**H. Zinder & Associates (1977 – 1980)**

Research Assistant and Supervisor of Regulatory Research

### ACADEMIC/TEACHING

**Trinity University (1986 – 1988)**

Assistant Professor of Finance

**Indiana University School of Business (1982 - 1986)**

Associate Instructor of Public Utilities and Transportation

**Northern Virginia Community College (1978)**

Lecturer in Accounting

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## **EDUCATION**

Ph.D., Indiana University School of Business, 1987

M.B.A., George Washington University, 1977

B.A., University of Virginia, 1975

**PROFESSIONAL ASSOCIATIONS**

American Economic Association  
American Finance Association  
American Gas Association Rate Committee (1989-2001)  
Energy Bar Association  
Financial Management Association

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**Montana-Dakota Utilities Co.**

**General Economic Statistics**  
*1987-2016*

Year	[1]	[2]	[3]	[4]	[5]
	Percentage Price Changes		Real GDP Growth	Nominal GDP (\$ billions)	Nominal GDP Growth
	Consumer Price Index	GDP Implicit Price Deflator			
1986	1.9%	2.0%	3.5%	4,590.2	
1987	3.6%	2.6%	3.5%	4,870.2	6.1%
1988	4.1%	3.5%	4.2%	5,252.6	7.9%
1989	4.8%	3.9%	3.7%	5,657.7	7.7%
1990	5.4%	3.7%	1.9%	5,979.6	5.7%
1991	4.2%	3.3%	-0.1%	6,174.0	3.3%
1992	3.0%	2.3%	3.6%	6,539.3	5.9%
1993	3.0%	2.4%	2.7%	6,878.7	5.2%
1994	2.6%	2.1%	4.0%	7,308.8	6.3%
1995	2.8%	2.1%	2.7%	7,664.1	4.9%
1996	3.0%	1.8%	3.8%	8,100.2	5.7%
1997	2.3%	1.7%	4.5%	8,608.5	6.3%
1998	1.6%	1.1%	4.5%	9,089.2	5.6%
1999	2.2%	1.5%	4.7%	9,660.6	6.3%
2000	3.4%	2.3%	4.1%	10,284.8	6.5%
2001	2.8%	2.3%	1.0%	10,621.8	3.3%
2002	1.6%	1.5%	1.8%	10,977.5	3.3%
2003	2.3%	2.0%	2.8%	11,510.7	4.9%
2004	2.7%	2.7%	3.8%	12,274.9	6.6%
2005	3.4%	3.2%	3.3%	13,093.7	6.7%
2006	3.2%	3.1%	2.7%	13,855.9	5.8%
2007	2.8%	2.7%	1.8%	14,477.6	4.5%
2008	3.8%	2.0%	-0.3%	14,718.6	1.7%
2009	-0.4%	0.8%	-2.8%	14,418.7	-2.0%
2010	1.6%	1.2%	2.5%	14,964.4	3.8%
2011	3.2%	2.1%	1.6%	15,517.9	3.7%
2012	2.1%	1.8%	2.2%	16,155.3	4.1%
2013	1.5%	1.6%	1.7%	16,691.5	3.3%
2014	1.6%	1.8%	2.4%	17,393.1	4.2%
2015	0.1%	1.1%	2.6%	18,036.6	3.7%
2016	1.3%	1.3%	1.6%	18,566.9	2.9%
Average Rate of Change:				[6]	
1987-2016	2.7%	2.2%	2.6%	4.6%	4.8%
1997-2016	2.2%	1.9%	2.3%	3.9%	4.3%
2007-2016	1.8%	1.6%	1.3%	2.5%	3.0%

Notes:

- [1] U.S. Department of Labor, Bureau of Labor Statistics; U.S. city average, all urban consumers, all items, not seasonally adjusted
- [2] U.S. Department of Commerce, Bureau of Economic Analysis; NIPA Tables 1.1.9, Revised on January 27, 2017
- [3] U.S. Department of Commerce, Bureau of Economic Analysis; NIPA Tables 1.1.1, Revised on January 27, 2017
- [4] U.S. Department of Commerce, Bureau of Economic Analysis; NIPA Tables 1.1.5, Revised on January 27, 2017
- [5] Equals annual percent change of Column [4]
- [6] Nominal GDP growth rates based on geometric average rate of change

**Montana Dakota Utilities Co.**

**Bond Yield Averages**  
*January 2010 - May 2017*

		[1]	[2]	[3]	[4]	[5]	[6]
		30-year U.S. Treasury Bond	Average Corporate	Public Utility Bonds		Credit Spreads	
				A-Rated	Baa-Rated	A-Rated	Baa-Rated
2010	JAN	4.60	5.76	5.77	6.16	1.17	1.55
	FEB	4.62	5.86	5.87	6.25	1.25	1.63
	MAR	4.64	5.81	5.84	6.22	1.20	1.58
	APR	4.69	5.80	5.81	6.19	1.12	1.49
	MAY	4.29	5.52	5.50	5.97	1.21	1.68
	JUN	4.13	5.52	5.46	6.18	1.34	2.05
	JUL	3.99	5.32	5.26	5.98	1.26	1.98
	AUG	3.80	5.05	5.01	5.55	1.20	1.74
	SEP	3.77	5.05	5.01	5.53	1.24	1.76
	OCT	3.87	5.15	5.10	5.62	1.23	1.75
	NOV	4.19	5.37	5.37	5.85	1.18	1.67
	DEC	4.42	5.55	5.56	6.04	1.14	1.62
2011	JAN	4.52	5.56	5.57	6.06	1.05	1.54
	FEB	4.65	5.66	5.68	6.10	1.03	1.45
	MAR	4.51	5.55	5.56	5.97	1.05	1.46
	APR	4.50	5.56	5.55	5.98	1.05	1.48
	MAY	4.29	5.33	5.32	5.74	1.03	1.45
	JUN	4.23	5.30	5.26	5.67	1.03	1.44
	JUL	4.27	5.30	5.27	5.70	0.99	1.43
	AUG	3.65	4.79	4.69	5.22	1.04	1.57
	SEP	3.18	4.60	4.48	5.11	1.30	1.93
	OCT	3.13	4.60	4.52	5.24	1.39	2.11
	NOV	3.02	4.39	4.25	4.93	1.23	1.92
	DEC	2.98	4.47	4.33	5.07	1.35	2.09
2012	JAN	3.03	4.45	4.34	5.06	1.31	2.04
	FEB	3.11	4.42	4.36	5.02	1.25	1.91
	MAR	3.28	4.54	4.48	5.13	1.20	1.85
	APR	3.18	4.49	4.40	5.11	1.21	1.93
	MAY	2.93	4.33	4.20	4.97	1.27	2.03
	JUN	2.70	4.22	4.08	4.91	1.38	2.21
	JUL	2.59	4.03	3.93	4.85	1.34	2.26
	AUG	2.77	4.09	4.00	4.88	1.23	2.11
	SEP	2.88	4.09	4.02	4.81	1.14	1.93
	OCT	2.90	3.97	3.91	4.54	1.01	1.64
	NOV	2.80	3.92	3.84	4.42	1.03	1.61
	DEC	2.88	4.05	4.00	4.56	1.12	1.67
2013	JAN	3.08	4.19	4.15	4.66	1.07	1.58
	FEB	3.17	4.27	4.18	4.74	1.02	1.58
	MAR	3.16	4.29	4.20	4.72	1.04	1.56
	APR	2.93	4.07	4.00	4.49	1.07	1.55
	MAY	3.11	4.23	4.17	4.65	1.05	1.54
	JUN	3.40	4.63	4.53	5.08	1.13	1.68
	JUL	3.61	4.76	4.68	5.21	1.08	1.60
	AUG	3.76	4.89	4.73	5.28	0.97	1.52
	SEP	3.79	4.95	4.80	5.31	1.02	1.52
	OCT	3.68	4.82	4.70	5.17	1.02	1.49
	NOV	3.80	4.91	4.77	5.24	0.97	1.44
	DEC	3.89	4.92	4.81	5.25	0.92	1.36

**Montana Dakota Utilities Co.**

**Bond Yield Averages**  
*January 2010 - May 2017*

		[1]	[2]	[3]	[4]	[5]	[6]
		30-year U.S. Treasury Bond	Average Corporate	Public Utility Bonds		Credit Spreads	
				A-Rated	Baa-Rated	A-Rated	Baa-Rated
2014	JAN	3.77	4.76	4.63	5.09	0.86	1.32
	FEB	3.66	4.68	4.53	5.01	0.87	1.35
	MAR	3.62	4.65	4.51	5.00	0.89	1.37
	APR	3.52	4.52	4.41	4.85	0.89	1.33
	MAY	3.39	4.38	4.26	4.69	0.87	1.30
	JUN	3.42	4.44	4.29	4.73	0.87	1.31
	JUL	3.33	4.37	4.23	4.66	0.89	1.33
	AUG	3.20	4.29	4.13	4.65	0.93	1.45
	SEP	3.26	4.39	4.24	4.79	0.98	1.53
	OCT	3.04	4.22	4.06	4.67	1.02	1.63
	NOV	3.04	4.28	4.09	4.75	1.05	1.71
	DEC	2.83	4.17	3.95	4.70	1.11	1.86
2015	JAN	2.46	3.84	3.58	4.39	1.13	1.94
	FEB	2.57	3.93	3.67	4.44	1.11	1.87
	MAR	2.63	3.98	3.74	4.51	1.12	1.88
	APR	2.59	3.93	3.75	4.51	1.16	1.92
	MAY	2.96	4.35	4.17	4.91	1.22	1.95
	JUN	3.11	4.56	4.39	5.13	1.28	2.01
	JUL	3.07	4.57	4.40	5.22	1.33	2.16
	AUG	2.86	4.48	4.25	5.23	1.39	2.37
	SEP	2.95	4.59	4.39	5.42	1.43	2.47
	OCT	2.89	4.52	4.29	5.47	1.40	2.58
	NOV	3.03	4.62	4.40	5.57	1.37	2.54
	DEC	2.97	4.58	4.35	5.55	1.26	2.12
2016	JAN	2.86	4.56	4.27	5.49	1.41	2.63
	FEB	2.62	4.44	4.12	5.28	1.49	2.66
	MAR	2.68	4.33	4.16	5.12	1.48	2.44
	APR	2.62	4.09	4.00	4.75	1.38	2.12
	MAY	2.63	4.04	3.93	4.60	1.30	1.97
	JUN	2.44	3.90	3.77	4.46	1.33	2.01
	JUL	2.22	3.67	3.57	4.16	1.35	1.94
	AUG	2.26	3.70	3.59	4.20	1.32	1.94
	SEP	2.34	3.78	3.66	4.27	1.31	1.92
	OCT	2.50	3.87	3.77	4.34	1.28	1.85
	NOV	2.88	4.20	4.09	4.65	1.20	1.76
	DEC	3.11	4.36	4.27	4.79	1.16	1.68
2017	JAN	3.02	4.22	4.14	4.62	1.12	1.60
	FEB	3.03	4.24	4.18	4.58	1.15	1.55
	MAR	3.08	4.28	4.23	4.62	1.15	1.53
	APR	2.94	4.16	4.12	4.51	1.18	1.58
	MAY	2.96	4.15	4.12	4.50	1.17	1.54
TTM	AVG	2.73	4.04	3.96	4.47	1.23	1.74

Notes:

- [1] Bloomberg Finance L.P., 30-Year U.S. Treasury Bond
- [2] Bloomberg Finance L.P., Moody's Average Corporate Bond Index
- [3] Bloomberg Finance L.P., Moody's A-Rated Utility Bond Index
- [4] Bloomberg Finance L.P., Moody's Baa-Rated Utility Bond Index
- [5] Equals Column [3] – Column [1]
- [6] Equals Column [4] – Column [1]

**Montana-Dakota Utilities Co.**  
**Common Equity Flotation Costs of**  
**Natural Gas Distribution Companies**  
*2004-2017*

Issuer	Date of Offering	Number of Shares	Issue Price	Net Proceeds Per Share	Financing Costs as a Percent of Net Proceeds
Piedmont Natural Gas Company, Inc.	1/20/2004	4,250,000	\$42.50	\$41.01	3.63%
MDU Resources Group, Inc.	2/4/2004	2,000,000	\$23.32	\$22.53	3.52%
UGI Corporation	3/18/2004	7,500,000	\$32.10	\$30.70	4.58%
Northwest Natural Gas Company	3/30/2004	1,200,000	\$31.00	\$29.99	3.37%
The Laclede Group, Inc.	5/25/2004	1,500,000	\$26.80	\$25.93	3.36%
Atmos Energy Corporation	7/13/2004	8,650,000	\$24.75	\$23.76	4.17%
Southern Union Company	7/26/2004	11,000,000	\$18.75	\$18.09	3.63%
Aquila, Inc.	8/18/2004	40,000,000	\$2.55	\$2.45	4.04%
Atmos Energy Corporation	10/21/2004	14,000,000	\$24.75	\$23.76	4.17%
AGL Resources Inc.	11/19/2004	9,600,000	\$31.01	\$30.08	3.09%
Cinergy Corporation	12/9/2004	6,100,000	\$41.00	\$40.51	1.21%
Southern Union Company	2/7/2005	14,910,000	\$23.00	\$22.30	3.14%
SEMCO Energy, Inc.	8/10/2005	4,300,000	\$6.32	\$6.07	4.17%
Chesapeake Utilities Corporation	11/16/2006	600,300	\$30.10	\$28.98	3.88%
Atmos Energy Corporation	12/7/2006	5,500,000	\$31.50	\$30.40	3.63%
Vectren Corporation	2/22/2007	4,600,000	\$28.33	\$27.34	3.63%
Unitil Corporation	12/10/2008	2,000,000	\$20.00	\$18.95	5.54%
Unitil Corporation	5/20/2009	2,400,000	\$20.00	\$18.95	5.54%
CenterPoint Energy, Inc.	9/10/2009	21,000,000	\$12.00	\$11.58	3.63%
CenterPoint Energy, Inc.	6/9/2010	22,000,000	\$12.90	\$12.45	3.63%
NiSource Inc.	9/8/2010	21,100,000	\$16.50	\$15.96	3.36%
Gas Natural Inc.	11/10/2010	2,100,000	\$10.00	\$9.40	6.38%
Unitil Corporation	5/10/2012	2,400,000	\$25.25	\$23.99	5.26%
Gas Natural Inc.	6/27/2012	700,000	\$10.10	\$9.49	6.38%
Piedmont Natural Gas Company, Inc.	1/29/2013	4,000,000	\$32.00	\$30.88	3.63%
The Laclede Group, Inc.	5/22/2013	8,700,000	\$44.50	\$42.78	4.02%
Gas Natural Inc.	7/11/2013	1,500,000	\$10.00	\$9.43	6.10%
Gas Natural Inc.	10/31/2013	1,134,155	\$10.00	\$9.43	6.10%
Atmos Energy Corporation	2/11/2014	8,000,000	\$44.00	\$42.46	3.63%
The Laclede Group, Inc.	6/5/2014	9,000,000	\$46.25	\$44.54	3.84%
South Jersey Industries, Inc.	5/12/2016	7,000,000	\$26.25	\$25.33	3.63%
Spire, Inc.	5/12/2016	1,900,000	\$63.05	\$61.00	3.36%
Chesapeake Utilities Corporation	9/22/2016	960,488	\$62.26	\$59.93	3.89%
Northwest Natural Gas Company	11/10/2016	1,012,000	\$54.63	\$52.58	3.90%
Average 2004-2017:					4.09%
Selected Flotation Costs for Cost of Equity:					4.00%

Sources: SNL Financial

## Montana-Dakota Utilities Co.

### Selected Natural Gas Distribution Companies Fiscal Year 2016 Operating Data

Company	Ticker	Total Assets (\$ millions)	Operating Revenues (\$ millions)	Operating Income (\$ millions)	
Atmos Energy Corporation	ATO	11,194.9	3,349.9	668.0	1/
New Jersey Resources Corporation	NJR	3,727.1	1,880.9	178.1	1/
NiSource Inc.	NI	18,691.9	4,492.5	858.2	2/
Northwest Natural Gas Company	NWN	3,079.8	676.0	139.3	2/
South Jersey Industries, Inc.	SJI	3,730.6	1,036.5	189.3	2/
Southwest Gas Corporation	SWX	5,581.1	2,460.5	295.7	2/
Spire Inc.	SR	6,077.4	1,537.3	282.3	1/
High		18,692	4,493	858	
<b>Average</b>		<b>7,440</b>	<b>2,205</b>	<b>373</b>	
<b>Median</b>		<b>5,581</b>	<b>1,881</b>	<b>282</b>	
Low		3,080	676	139	
MDU North Dakota Gas		<b>\$135.5</b>	<b>\$118.0</b>	<b>\$14.3</b>	3/
MDU North Dakota Distribution % of:					
- Proxy Company Median		2.43%	6.27%	5.07%	

Notes:

1/ Source: SNL Financial LC; data as of September 30, 2016

2/ Source: SNL Financial LC; data as of December 31, 2016

3/ Source: MDU Statement J, page 3, based on test year revenue requirement and rate base

**Montana-Dakota Utilities Co.**

**Selected Natural Gas Distribution Companies  
Credit Ratings**

Company	Ticker	Standard & Poor's	Moody's
Atmos Energy Corporation	ATO	A	A2
New Jersey Resources Corporation	NJR	A	Aa2
NiSource Inc.	NI	BBB+	Baa2
Northwest Natural Gas Company	NWN	A+	A3
South Jersey Industries, Inc.	SJI	BBB+	--
Southwest Gas Corporation	SWX	BBB+	--
Spire Inc.	SR	A-	Baa2
<b>Average</b>		<b>A-</b>	<b>A3</b>
<b>Median</b>		<b>A-</b>	<b>A3</b>
MDU Resources, Inc.		BBB+	--

Notes:

Source: SNL Financial as of April 28, 2017

New Jersey Resources Corporation rating is for New Jersey Natural Gas Company

**Montana-Dakota Utilities Co.**

**Selected Natural Gas Distribution Companies  
Dividend Yields  
November 2016 - April 2017**

Company	Ticker				Annualized Dividend	Average Dividend Yield
Atmos Energy Corporation	ATO					2.38%
New Jersey Resources Corporation	NJR					2.76%
NiSource Inc.	NI					2.98%
Northwest Natural Gas Company	NWN					3.20%
South Jersey Industries, Inc.	SJI					3.22%
Southwest Gas Corporation	SWX					2.27%
Spire Inc.	SR					3.19%
<b>Average</b>						<b>2.86%</b>
<b>Median</b>						<b>2.98%</b>

Company	Ticker	Date	Price			Annualized Dividend	Dividend Yield
			Low	High	Average		
Atmos Energy Corporation	ATO	Nov-16	\$ 70.47	\$ 74.15	\$ 72.31	\$ 1.80	2.49%
		Dec-16	70.16	74.73	72.45	1.80	2.48%
		Jan-17	73.21	76.18	74.70	1.80	2.41%
		Feb-17	74.56	78.29	76.43	1.80	2.36%
		Mar-17	76.25	80.40	78.33	1.80	2.30%
		Apr-17	78.90	81.40	80.15	1.80	2.25%
						<b>2.38%</b>	
New Jersey Resources Corporation	NJR	Nov-16	\$ 32.25	\$ 35.30	\$ 33.78	\$ 1.02	3.02%
		Dec-16	33.95	37.00	35.48	1.02	2.88%
		Jan-17	34.25	37.70	35.98	1.02	2.84%
		Feb-17	37.10	39.50	38.30	1.02	2.66%
		Mar-17	37.85	39.75	38.80	1.02	2.63%
		Apr-17	39.15	40.95	40.05	1.02	2.55%
						<b>2.76%</b>	
NiSource Inc.	NI	Nov-16	\$ 21.41	\$ 22.58	\$ 22.00	\$ 0.66	3.00%
		Dec-16	21.47	22.43	21.95	0.66	3.01%
		Jan-17	21.84	22.68	22.26	0.66	2.96%
		Feb-17	21.98	24.01	23.00	0.70	3.04%
		Mar-17	22.99	24.09	23.54	0.70	2.97%
		Apr-17	23.66	24.43	24.05	0.70	2.91%
						<b>2.98%</b>	
Northwest Natural Gas Company	NWN	Nov-16	\$ 54.85	\$ 59.65	\$ 57.25	\$ 1.88	3.28%
		Dec-16	56.00	61.50	58.75	1.88	3.20%
		Jan-17	57.65	60.55	59.10	1.88	3.18%
		Feb-17	57.45	61.40	59.43	1.88	3.16%
		Mar-17	56.85	60.90	58.88	1.88	3.19%
		Apr-17	58.50	60.50	59.50	1.88	3.16%
						<b>3.20%</b>	
South Jersey Industries, Inc.	SJI	Nov-16	\$ 28.22	\$ 33.85	\$ 31.04	\$ 1.06	3.40%
		Dec-16	32.70	34.68	33.69	1.09	3.24%
		Jan-17	31.50	34.21	32.86	1.09	3.32%
		Feb-17	32.52	35.02	33.77	1.09	3.23%
		Mar-17	32.93	35.75	34.34	1.09	3.17%
		Apr-17	35.35	38.12	36.74	1.09	2.97%
						<b>3.22%</b>	
Southwest Gas Corporation	SWX	Nov-16	\$ 70.47	\$ 76.20	\$ 73.34	\$ 1.80	2.45%
		Dec-16	73.33	76.64	74.99	1.80	2.40%
		Jan-17	76.02	80.57	78.30	1.80	2.30%
		Feb-17	78.93	85.54	82.24	1.80	2.19%
		Mar-17	81.63	86.27	83.95	1.80	2.14%
		Apr-17	83.13	85.17	84.15	1.80	2.14%
						<b>2.27%</b>	
Spire Inc.	SR	Nov-16	\$ 60.75	\$ 66.25	\$ 63.50	\$ 1.96	3.09%
		Dec-16	62.95	65.05	64.00	2.10	3.28%
		Jan-17	63.70	65.60	64.65	2.10	3.25%
		Feb-17	62.60	66.10	64.35	2.10	3.26%
		Mar-17	63.90	67.50	65.70	2.10	3.20%
		Apr-17	67.40	69.80	68.60	2.10	3.06%
						<b>3.19%</b>	

Source: Bloomberg Finance L.P.

**Montana-Dakota Utilities Co.**

**Selected Natural Gas Distribution Companies  
Earnings Growth Rate Estimates**

Company	Ticker	1/2	1/2	Weighted Average
		Zacks 5-Yr Earnings Growth	Yahoo Finance! Earnings Growth	
Atmos Energy Corporation	ATO	7.00%	6.90%	6.95%
New Jersey Resources Corporation	NJR	6.00%	6.00%	6.00%
NiSource Inc.	NI	6.20%	8.00%	7.10%
Northwest Natural Gas Company	NWN	4.30%	4.50%	4.40%
South Jersey Industries, Inc.	SJI	10.00%	6.00%	8.00%
Southwest Gas Corporation	SWX	5.00%	4.00%	4.50%
Spire Inc.	SR	4.10%	4.05%	4.08%
<b>Average</b>		<b>6.09%</b>	<b>5.64%</b>	<b>5.86%</b>
<b>Median</b>		<b>6.00%</b>	<b>6.00%</b>	<b>6.00%</b>

Source: Yahoo Finance! and Zacks Investment Research as of April 28, 2017.



**Montana-Dakota Utilities Co.**

**Selected Natural Gas Distribution Companies  
Blended Growth Rate Estimates**

Company	Ticker	2/3	1/3	Weighted Average
		Earnings Growth	Sustainable Growth	
Atmos Energy Corporation	ATO	6.95%	9.63%	7.84%
New Jersey Resources Corporation	NJR	6.00%	5.75%	5.92%
NiSource Inc.	NI	7.10%	4.29%	6.16%
Northwest Natural Gas Company	NWN	4.40%	3.99%	4.26%
South Jersey Industries, Inc.	SJI	8.00%	1.82%	5.94%
Southwest Gas Corporation	SWX	4.50%	7.10%	5.37%
Spire Inc.	SR	4.08%	5.08%	4.41%
<b>Average</b>		<b>5.86%</b>	<b>5.38%</b>	<b>5.70%</b>
<b>Median</b>		<b>6.00%</b>	<b>5.08%</b>	<b>5.92%</b>

Source: Schedule 4, page 2 & 3

**Montana-Dakota Utilities Co.**

**Selected Natural Gas Distribution Companies  
Basic DCF Calculation**

Company	Ticker	Dividend Yield	Dividend Yield x (1 + 0.625g)	Expected Growth Rate (g)	Secondary Market:	Flotation Cost Adjustment	Primary Market:
					Investor Required Return		Cost of Capital
Atmos Energy Corporation	ATO	2.38%	2.48%	6.95%	9.43%	1.04	9.81%
New Jersey Resources Corporation	NJR	2.76%	2.87%	6.00%	8.87%	1.04	9.22%
NiSource Inc.	NI	2.98%	3.12%	7.10%	10.22%	1.04	10.62%
Northwest Natural Gas Company	NWN	3.20%	3.28%	4.40%	7.68%	1.04	7.99%
South Jersey Industries, Inc.	SJI	3.22%	3.38%	8.00%	11.38%	1.04	11.84%
Southwest Gas Corporation	SWX	2.27%	2.33%	4.50%	6.83%	1.04	7.11%
Spire Inc.	SR	3.19%	3.27%	4.08%	7.35%	1.04	7.64%
High					11.38%		11.84%
3 <sup>rd</sup> Quartile					9.82%		10.22%
<b>2<sup>nd</sup> Quartile (Median)</b>					<b>8.87%</b>		<b>9.22%</b>
1 <sup>st</sup> Quartile					7.52%		7.82%
Low					6.83%		7.11%

Source: Schedule 2 and Schedule 4, page 1 & 2

**Montana-Dakota Utilities Co.**

**Selected Natural Gas Distribution Companies  
Blended Growth Rate DCF Calculation**

Company	Ticker	Dividend Yield	Dividend Yield x (1 + 0.625g)	Expected Growth Rate (g)	Secondary Market:	Flotation Cost Adjustment	Primary Market:
					Investor Required Return		Cost of Capital
Atmos Energy Corporation	ATO	2.38%	2.50%	7.84%	10.34%	1.04	10.75%
New Jersey Resources Corporation	NJR	2.76%	2.86%	5.92%	8.78%	1.04	9.13%
NiSource Inc.	NI	2.98%	3.10%	6.16%	9.26%	1.04	9.63%
Northwest Natural Gas Company	NWN	3.20%	3.28%	4.26%	7.55%	1.04	7.85%
South Jersey Industries, Inc.	SJI	3.22%	3.34%	5.94%	9.28%	1.04	9.65%
Southwest Gas Corporation	SWX	2.27%	2.35%	5.37%	7.71%	1.04	8.02%
Spire Inc.	SR	3.19%	3.28%	4.41%	7.69%	1.04	8.00%
High					10.34%		10.75%
3 <sup>rd</sup> Quartile					9.27%		9.64%
<b>2<sup>nd</sup> Quartile (Median)</b>					<b>8.78%</b>		<b>9.13%</b>
1 <sup>st</sup> Quartile					7.70%		8.01%
Low					7.55%		7.85%

Source: Schedule 2 and Schedule 4, page 1 & 4

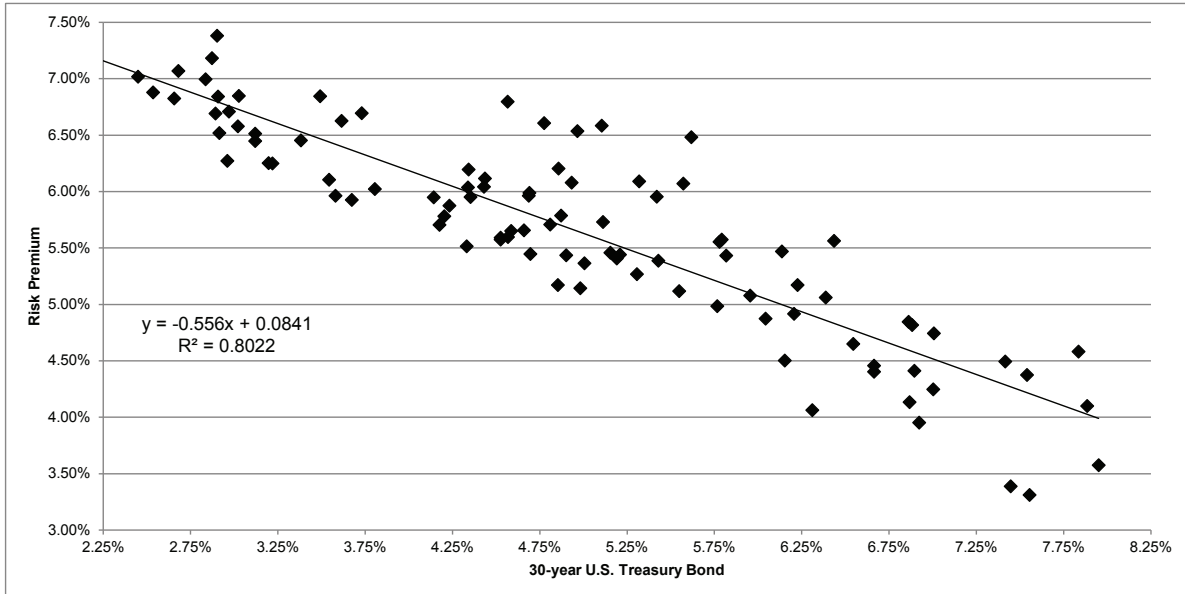
BOND YIELD PLUS RISK PREMIUM

	[1]	[2]	[3]
	Average Authorized Natural Gas ROE	30-year U.S. Treasury Bond	Risk Premium
1992.1	12.42%	7.84%	4.58%
1992.2	11.98%	7.88%	4.10%
1992.3	11.91%	7.42%	4.49%
1992.4	11.92%	7.54%	4.38%
1993.1	11.75%	7.01%	4.74%
1993.2	11.71%	6.86%	4.85%
1993.3	11.40%	6.23%	5.17%
1993.4	11.12%	6.21%	4.92%
1994.1	11.12%	6.66%	4.46%
1994.2	10.84%	7.45%	3.39%
1994.3	10.87%	7.55%	3.31%
1994.4	11.53%	7.95%	3.58%
1995.2	11.00%	6.87%	4.13%
1995.3	11.07%	6.66%	4.40%
1995.4	11.61%	6.14%	5.47%
1996.1	11.45%	6.39%	5.06%
1996.2	10.88%	6.92%	3.95%
1996.3	11.25%	7.00%	4.25%
1996.4	11.19%	6.54%	4.65%
1997.1	11.31%	6.90%	4.41%
1997.2	11.70%	6.88%	4.82%
1997.3	12.00%	6.44%	5.56%
1997.4	10.92%	6.04%	4.87%
1998.2	11.37%	5.79%	5.57%
1998.3	11.41%	5.32%	6.09%
1998.4	11.69%	5.11%	6.59%
1999.1	10.82%	5.43%	5.39%
1999.2	11.25%	5.82%	5.43%
1999.4	10.38%	6.31%	4.06%
2000.1	10.66%	6.15%	4.50%
2000.2	11.03%	5.95%	5.08%
2000.3	11.33%	5.78%	5.56%
2000.4	12.10%	5.62%	6.48%
2001.1	11.38%	5.42%	5.96%
2001.2	10.75%	5.77%	4.98%
2001.4	10.65%	5.21%	5.44%
2002.1	10.67%	5.55%	5.12%
2002.2	11.64%	5.57%	6.07%
2002.3	11.50%	4.96%	6.54%
2002.4	11.01%	4.93%	6.08%
2003.1	11.38%	4.78%	6.61%
2003.2	11.36%	4.57%	6.80%
2003.3	10.61%	5.15%	5.46%
2003.4	10.84%	5.11%	5.73%
2004.1	11.06%	4.86%	6.20%
2004.2	10.57%	5.31%	5.27%
2004.3	10.37%	5.01%	5.36%
2004.4	10.66%	4.87%	5.79%
2005.1	10.65%	4.69%	5.96%
2005.2	10.54%	4.34%	6.19%
2005.3	10.47%	4.43%	6.04%
2005.4	10.32%	4.66%	5.66%
2006.1	10.68%	4.69%	5.99%
2006.2	10.60%	5.19%	5.41%
2006.3	10.34%	4.90%	5.44%
2006.4	10.14%	4.70%	5.45%

BOND YIELD PLUS RISK PREMIUM

	[1]	[2]	[3]
	Average Authorized Natural Gas ROE	30-year U.S. Treasury Bond	Risk Premium
2007.1	10.52%	4.81%	5.71%
2007.2	10.13%	4.98%	5.14%
2007.3	10.03%	4.85%	5.17%
2007.4	10.12%	4.53%	5.59%
2008.1	10.38%	4.34%	6.04%
2008.2	10.17%	4.57%	5.60%
2008.3	10.55%	4.44%	6.12%
2008.4	10.34%	3.49%	6.85%
2009.1	10.24%	3.62%	6.63%
2009.2	10.11%	4.23%	5.87%
2009.3	9.88%	4.18%	5.70%
2009.4	10.31%	4.35%	5.95%
2010.1	10.24%	4.59%	5.65%
2010.2	9.99%	4.20%	5.78%
2010.3	10.43%	3.73%	6.70%
2010.4	10.09%	4.14%	5.95%
2011.1	10.10%	4.53%	5.57%
2011.2	9.85%	4.33%	5.51%
2011.3	9.65%	3.54%	6.11%
2011.4	9.88%	3.03%	6.85%
2012.1	9.63%	3.12%	6.51%
2012.2	9.83%	2.84%	7.00%
2012.3	9.75%	2.68%	7.07%
2012.4	10.06%	2.87%	7.18%
2013.1	9.57%	3.12%	6.45%
2013.2	9.47%	3.22%	6.25%
2013.3	9.60%	3.67%	5.93%
2013.4	9.83%	3.81%	6.02%
2014.1	9.54%	3.58%	5.96%
2014.2	9.84%	3.38%	6.45%
2014.3	9.45%	3.20%	6.25%
2014.4	10.28%	2.90%	7.38%
2015.1	9.47%	2.45%	7.02%
2015.2	9.43%	2.92%	6.52%
2015.3	9.75%	2.91%	6.84%
2015.4	9.68%	2.97%	6.71%
2016.1	9.48%	2.66%	6.83%
2016.2	9.42%	2.54%	6.88%
2016.3	9.47%	2.24%	7.22%
2016.4	9.59%	2.89%	6.69%
2017.1	9.60%	3.02%	6.58%
2017.2	9.23%	2.96%	6.27%
Average	10.59%	4.92%	5.68%
Median	10.56%	4.86%	5.72%

BOND YIELD PLUS RISK PREMIUM



SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.895674832
R Square	0.802233405
Adjusted R Square	0.800173336
Standard Error	0.004084076
Observations	98

ANOVA

	df	SS	MS	F	Significance F
Regression	1	0.00649541	0.00649541	389.4207048	1.48518E-35
Residual	96	0.001601249	1.66797E-05		
Total	97	0.008096658			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	0.084098699	0.001445096	58.19592207	1.12791E-76	0.081230206	0.086967192	0.081230206	0.086967192
30-year U.S. T-Bond	-0.55599725	0.028174948	-19.73374533	1.48518E-35	-0.61192408	-0.50007042	-0.61192408	-0.50007042

	T-Bond	Premium	ROE
Current 30-day average of 30-year U.S. Treasury bond yield [4]	2.80%	6.85%	9.65%
Near-term projected 30-year U.S. Treasury bond yield (Q2 2017 - Q3 2018) [5]	3.40%	6.52%	9.92%
Projected 30-year U.S. Treasury bond yield (2019 - 2023) [6]	4.30%	6.02%	10.32%
MEAN			9.96%

Notes:

- [1] Source: Regulatory Research Associates, accessed April 28, 2017
- [2] Source: Bloomberg Professional, quarterly bond yields are the daily average of each trading day in the quarter
- [3] Equals [1] - [2]
- [4] Source: Bloomberg Professional, as of April 28, 2017
- [5] Source: Blue Chip Financial Forecasts, Vol. 36, No. 6, June 1, 2017, at 2
- [6] Source: Blue Chip Financial Forecasts, Vol. 36, No. 6, June 1, 2017, at 14.
- [7] See Notes [4], [5] and [6]
- [8] Equals  $0.084099 + (-0.555997 \times [7])$
- [9] Equals [7] + [8]

**Montana-Dakota Utilities Co.**

**Market DCF Calculation as of April 28, 2017**

		[1]	[2]	[3]	[4]					
		Dividend Yield	Dividend Yield x (1 + 0.625g)	Expected Growth Rate (g)	Secondary Market Investor Required Return					
<b>S&amp;P 500</b>		<b>2.39%</b>	<b>2.54%</b>	<b>10.00%</b>	<b>12.54%</b>					
		[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	
Company	Ticker	Shares Outstanding (million)	Price	Market Capitalization (\$million)	Percent of Total Market Capitalization	Current Dividend Yield	Long-Term Growth Estimate	Market Capitalization-Weighted Dividend Yield	Market Capitalization-Weighted Long-Term Growth Estimate	
LyondellBasell Industries NV	LYB	402.8	84.76	34,142	0.1965%	4.01%	6.50%	0.0079%	0.0128%	
American Express Co	AXP	893.8	79.25	70,832	0.4077%	1.62%	8.20%	0.0066%	0.0334%	
Verizon Communications Inc	VZ	4,079.4	45.91	187,284	1.0781%	5.03%	2.72%	0.0542%	0.0293%	
Broadcom Ltd	AVGO	401.4	220.81	88,625	0.5102%	1.85%	15.42%	0.0094%	0.0787%	
Boeing Co/The	BA	603.6	184.83	111,560	0.6422%	3.07%	14.33%	0.0197%	0.0920%	
Caterpillar Inc	CAT	589.2	102.26	60,247	0.3468%	3.01%	7.64%	0.0104%	0.0265%	
JPMorgan Chase & Co	JPM	3,557.9	87.00	309,534	1.7818%	2.30%	7.80%	0.0410%	0.1390%	
Chevron Corp	CVX	1,894.6	106.70	202,150	1.1636%	4.05%	28.87%	0.0471%	0.3359%	
Coca-Cola Co/The	KO	4,272.6	43.15	184,361	1.0612%	3.43%	5.16%	0.0364%	0.0548%	
AbbVie Inc	ABBV	1,593.6	65.94	105,080	0.6049%	3.88%	9.27%	0.0235%	0.0561%	
Walt Disney Co/The	DIS	1,581.2	115.60	182,792	1.0522%	1.35%	7.75%	0.0142%	0.0816%	
Extra Space Storage Inc	EXR	125.9	75.53	9,510	0.0547%	4.13%	7.54%	0.0023%	0.0041%	
EI du Pont de Nemours & Co	DD	867.0	79.75	69,146	0.3980%	1.91%	6.72%	0.0076%	0.0267%	
Exxon Mobil Corp	XOM	4,239.7	81.65	346,174	1.9927%	3.77%	13.80%	0.0752%	0.2751%	
Phillips 66	PSX	517.0	79.56	41,130	0.0000%	3.17%	-12.32%	0.0000%	0.0000%	
General Electric Co	GE	8,708.7	28.99	252,466	1.4533%	3.31%	10.03%	0.0481%	0.1457%	
HP Inc	HPQ	1,690.8	18.82	31,821	0.1832%	2.82%	1.75%	0.0052%	0.0032%	
Home Depot Inc/The	HD	1,201.2	156.10	187,502	1.0793%	2.28%	12.45%	0.0246%	0.1343%	
International Business Machines Corp	IBM	939.5	160.29	150,592	0.8669%	3.74%	6.64%	0.0324%	0.0576%	
Concho Resources Inc	CXO	148.2	126.66	18,767	0.0000%	n/a	3.24%	n/a	0.0000%	
Johnson & Johnson	JNJ	2,710.9	123.47	334,714	1.9267%	2.72%	6.45%	0.0524%	0.1243%	
McDonald's Corp	MCD	816.8	139.93	114,288	0.6579%	2.69%	9.77%	0.0177%	0.0643%	
Merck & Co Inc	MRK	2,741.5	62.33	170,880	0.9836%	3.02%	5.36%	0.0297%	0.0527%	
3M Co	MMM	597.6	195.83	117,027	0.6737%	2.40%	8.40%	0.0162%	0.0566%	
American Water Works Co Inc	AWK	177.7	79.76	14,176	0.0816%	2.08%	7.00%	0.0017%	0.0057%	
Bank of America Corp	BAC	10,011.9	23.34	233,679	1.3451%	1.29%	13.94%	0.0173%	0.1875%	
CSRA Inc	CSRA	163.1	29.08	4,743	0.0273%	1.38%	6.20%	0.0004%	0.0017%	
Pfizer Inc	PFE	5,955.1	33.92	201,998	1.1628%	3.77%	5.08%	0.0439%	0.0590%	
Procter & Gamble Co/The	PG	2,557.6	87.33	223,356	1.2857%	3.16%	7.56%	0.0406%	0.0972%	
AT&T Inc	T	6,147.0	39.63	243,606	1.4023%	4.95%	4.75%	0.0694%	0.0666%	
Travelers Cos Inc/The	TRV	279.4	121.66	33,994	0.1957%	2.37%	6.88%	0.0046%	0.0135%	
United Technologies Corp	UTX	801.2	118.99	95,338	0.5488%	2.22%	7.92%	0.0122%	0.0435%	
Analog Devices Inc	ADI	365.1	76.20	27,820	0.1601%	2.36%	10.96%	0.0038%	0.0176%	
Wal-Mart Stores Inc	WMT	3,031.6	75.18	227,912	1.3119%	2.71%	4.84%	0.0356%	0.0635%	
Cisco Systems Inc	CSCO	5,007.9	34.07	170,618	0.9821%	3.40%	7.44%	0.0334%	0.0731%	
Intel Corp	INTC	4,709.0	36.15	170,230	0.9799%	3.02%	7.79%	0.0295%	0.0763%	
General Motors Co	GM	1,509.1	34.64	52,276	0.3009%	4.39%	10.23%	0.0132%	0.0308%	
Microsoft Corp	MSFT	7,720.5	68.46	528,546	3.0425%	2.28%	9.57%	0.0693%	0.2911%	
Dollar General Corp	DG	274.9	72.71	19,987	0.1151%	1.43%	9.65%	0.0016%	0.0111%	
Kinder Morgan Inc/DE	KMI	2,232.4	20.63	46,055	0.2651%	2.42%	10.00%	0.0064%	0.0265%	
Citigroup Inc	C	2,764.9	59.12	163,459	0.9409%	1.08%	4.43%	0.0102%	0.0417%	
American International Group Inc	AIG	979.6	60.91	59,665	0.3435%	2.10%	11.00%	0.0072%	0.0378%	
Honeywell International Inc	HON	762.3	131.14	99,973	0.5755%	2.03%	9.29%	0.0117%	0.0535%	
Altria Group Inc	MO	1,935.7	71.78	138,946	0.7998%	3.40%	7.64%	0.0272%	0.0611%	
HCA Holdings Inc	HCA	370.4	84.21	31,195	0.0000%	n/a	11.18%	n/a	0.0000%	
Under Armour Inc	UA	184.7	21.49	3,968	0.0000%	n/a	17.98%	n/a	0.0000%	
International Paper Co	IP	412.9	53.97	22,284	0.1283%	3.43%	6.86%	0.0044%	0.0088%	
Hewlett Packard Enterprise Co	HPE	1,657.7	18.63	30,883	0.0000%	1.40%	-4.80%	0.0000%	0.0000%	
Abbott Laboratories	ABT	1,728.0	43.64	75,410	0.4341%	2.43%	10.70%	0.0105%	0.0464%	
Aflac Inc	AFL	401.2	74.88	30,040	0.1729%	2.30%	3.30%	0.0040%	0.0057%	
Air Products & Chemicals Inc	APD	217.7	140.50	30,590	0.1761%	2.70%	8.19%	0.0048%	0.0144%	
Royal Caribbean Cruises Ltd	RCL	214.9	106.60	22,911	0.1319%	1.80%	18.57%	0.0024%	0.0245%	
American Electric Power Co Inc	AEP	491.7	67.83	33,353	0.1920%	3.48%	4.75%	0.0067%	0.0091%	
Hess Corp	HES	316.5	48.83	15,456	0.0000%	2.05%	-9.60%	0.0000%	0.0000%	
Anadarko Petroleum Corp	APC	558.7	57.02	31,857	0.0000%	0.35%	-0.49%	0.0000%	0.0000%	
Aon PLC	AON	262.6	119.84	31,470	0.1812%	1.20%	9.77%	0.0022%	0.0177%	
Apache Corp	APA	380.4	48.64	18,501	0.0000%	2.06%	-14.70%	0.0000%	0.0000%	
Archer-Daniels-Midland Co	ADM	570.7	45.75	26,108	0.1503%	2.80%	11.86%	0.0042%	0.0178%	
Automatic Data Processing Inc	ADP	448.9	104.49	46,906	0.2700%	2.18%	11.02%	0.0059%	0.0297%	
Verisk Analytics Inc	VRSK	166.4	82.81	13,778	0.0000%	n/a	10.55%	n/a	0.0000%	
AutoZone Inc	AZO	28.4	692.19	19,663	0.0000%	n/a	14.01%	n/a	0.0000%	
Avery Dennison Corp	AVY	88.1	83.21	7,333	0.0422%	2.16%	7.10%	0.0009%	0.0030%	

**Montana-Dakota Utilities Co.**

**Market DCF Calculation as of April 28, 2017**

		[1]	[2]	[3]	[4]				
		Dividend Yield	Dividend Yield x (1 + 0.625g)	Expected Growth Rate (g)	Secondary Market Investor Required Return				
<b>S&amp;P 500</b>		<b>2.39%</b>	<b>2.54%</b>	<b>10.00%</b>	<b>12.54%</b>				
		[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
Company	Ticker	Shares Outstanding (million)	Price	Market Capitalization (\$million)	Percent of Total Market Capitalization	Current Dividend Yield	Long-Term Growth Estimate	Market Capitalization-Weighted Dividend Yield	Market Capitalization-Weighted Long-Term Growth Estimate
Baker Hughes Inc	BHI	425.5	59.37	25,260	0.1454%	1.15%	20.50%	0.0017%	0.0298%
Ball Corp	BLL	175.1	76.89	13,461	0.0775%	0.52%	5.50%	0.0004%	0.0043%
Bank of New York Mellon Corp/The	BK	1,035.6	47.06	48,737	0.2805%	1.62%	12.31%	0.0045%	0.0345%
CR Bard Inc	BCR	72.4	307.48	22,267	0.1282%	0.34%	9.30%	0.0004%	0.0119%
Baxter International Inc	BAX	542.0	55.68	30,176	0.1737%	0.93%	13.08%	0.0016%	0.0227%
Becton Dickinson and Co	BDX	212.8	186.97	39,792	0.2291%	1.56%	10.19%	0.0036%	0.0233%
Berkshire Hathaway Inc	BRK/B	1,310.3	165.21	216,475	0.0000%	n/a	n/a	n/a	n/a
Best Buy Co Inc	BBY	309.1	51.81	16,015	0.0922%	2.63%	11.55%	0.0024%	0.0106%
H&R Block Inc	HRB	207.2	24.79	5,136	0.0296%	3.55%	11.00%	0.0010%	0.0033%
Boston Scientific Corp	BSX	1,369.0	26.38	36,113	0.0000%	n/a	9.80%	n/a	0.0000%
Bristol-Myers Squibb Co	BMJ	1,647.4	56.05	92,339	0.5315%	2.78%	15.33%	0.0148%	0.0815%
Fortune Brands Home & Security Inc	FBHS	153.5	63.74	9,784	0.0563%	1.13%	12.48%	0.0006%	0.0070%
Brown-Forman Corp	BF/B	214.8	47.32	10,167	0.0585%	1.54%	1.53%	0.0009%	0.0009%
Cabot Oil & Gas Corp	COG	465.5	23.24	10,819	0.0623%	0.34%	41.29%	0.0002%	0.0257%
Campbell Soup Co	CPB	304.4	57.54	17,514	0.1008%	2.43%	4.98%	0.0025%	0.0050%
Kansas City Southern	KSU	106.1	90.07	9,555	0.0550%	1.47%	12.56%	0.0008%	0.0069%
Advanced Micro Devices Inc	AMD	941.4	13.30	12,521	0.0000%	n/a	8.33%	n/a	0.0000%
Carnival Corp	CCL	536.6	61.77	33,147	0.1908%	2.59%	13.55%	0.0049%	0.0259%
Qorvo Inc	QRVO	126.5	68.03	8,603	0.0000%	n/a	14.07%	n/a	0.0000%
CenturyLink Inc	CTL	548.9	25.67	14,089	0.0000%	8.41%	-0.45%	0.0000%	0.0000%
Cigna Corp	CI	256.7	156.37	40,135	0.2310%	0.03%	11.98%	0.0001%	0.0277%
UDR Inc	UDR	267.4	37.34	9,984	0.0575%	3.32%	6.41%	0.0019%	0.0037%
Clorox Co/The	CLX	128.3	133.69	17,148	0.0987%	2.39%	7.01%	0.0024%	0.0069%
CMS Energy Corp	CMS	280.0	45.40	12,713	0.0732%	2.93%	6.33%	0.0021%	0.0046%
Colgate-Palmolive Co	CL	883.3	72.04	63,632	0.3663%	2.22%	9.04%	0.0081%	0.0331%
Comerica Inc	CMA	176.3	70.70	12,466	0.0718%	1.47%	10.97%	0.0011%	0.0079%
CA Inc	CA	418.0	32.83	13,722	0.0790%	3.11%	6.05%	0.0025%	0.0048%
Conagra Brands Inc	CAG	425.5	38.78	16,501	0.0950%	2.06%	8.65%	0.0020%	0.0082%
Consolidated Edison Inc	ED	305.3	79.28	24,202	0.1393%	3.48%	3.27%	0.0049%	0.0046%
SL Green Realty Corp	SLG	101.8	104.93	10,685	0.0615%	2.95%	0.58%	0.0018%	0.0004%
Coming Inc	GLW	920.2	28.85	26,549	0.1528%	2.15%	9.19%	0.0033%	0.0140%
Cummins Inc	CMI	168.0	150.94	25,354	0.1459%	2.72%	8.50%	0.0040%	0.0124%
Danaher Corp	DHR	694.1	83.33	57,841	0.3330%	0.67%	10.41%	0.0022%	0.0347%
Target Corp	TGT	552.7	55.85	30,867	0.0000%	4.30%	-1.11%	0.0000%	0.0000%
Deere & Co	DE	318.3	111.61	35,524	0.2045%	2.15%	7.70%	0.0044%	0.0157%
Dominion Resources Inc/VA	D	628.2	77.43	48,644	0.2800%	3.90%	5.68%	0.0109%	0.0159%
Dover Corp	DOV	155.7	78.88	12,279	0.0707%	2.23%	13.63%	0.0016%	0.0096%
CBOE Holdings Inc	CBOE	112.0	82.41	9,229	0.0000%	1.21%	n/a	0.0000%	n/a
Dow Chemical Co/The	DOW	1,221.7	62.80	76,723	0.4416%	2.93%	6.58%	0.0129%	0.0291%
Duke Energy Corp	DUK	699.9	82.50	57,740	0.3324%	4.15%	5.05%	0.0138%	0.0168%
Eaton Corp PLC	ETN	448.6	75.64	33,929	0.1953%	3.17%	9.20%	0.0062%	0.0180%
Ecolab Inc	ECL	290.1	129.09	37,443	0.2155%	1.15%	13.00%	0.0025%	0.0280%
PerkinElmer Inc	PKI	109.8	59.41	6,522	0.0375%	0.47%	9.57%	0.0002%	0.0036%
Emerson Electric Co	EMR	645.1	60.28	38,885	0.2238%	3.19%	7.08%	0.0071%	0.0158%
EOG Resources Inc	EOG	577.2	92.50	53,387	0.0000%	0.72%	-6.08%	0.0000%	0.0000%
Entergy Corp	ETR	180.2	76.26	13,739	0.0000%	4.56%	-2.70%	0.0000%	0.0000%
Equifax Inc	EFX	120.2	135.31	16,266	0.0936%	1.15%	8.90%	0.0011%	0.0083%
EQT Corp	EQT	173.3	58.14	10,077	0.0580%	0.21%	15.00%	0.0001%	0.0087%
XL Group Ltd	XL	263.8	41.85	11,039	0.0635%	2.10%	9.00%	0.0013%	0.0057%
Gartner Inc	IT	90.5	114.09	10,320	0.0000%	n/a	14.83%	n/a	0.0000%
FedEx Corp	FDX	267.4	189.70	50,721	0.2920%	0.84%	13.67%	0.0025%	0.0399%
Macy's Inc	M	305.2	29.22	8,918	0.0513%	5.17%	2.63%	0.0027%	0.0013%
FMC Corp	FMC	133.8	73.23	9,800	0.0564%	0.90%	12.00%	0.0005%	0.0068%
Ford Motor Co	F	3,911.1	11.47	44,861	0.2582%	5.23%	3.82%	0.0135%	0.0099%
NextEra Energy Inc	NEE	468.2	133.56	62,528	0.3599%	2.94%	6.75%	0.0106%	0.0243%
Franklin Resources Inc	BEN	561.3	43.11	24,198	0.1393%	1.86%	10.00%	0.0026%	0.0139%
Freeport-McMoRan Inc	FCX	1,446.6	12.75	18,445	0.0000%	n/a	12.55%	n/a	0.0000%
TEGNA Inc	TGNA	214.8	25.48	5,473	0.0315%	2.20%	5.50%	0.0007%	0.0017%
Gap Inc/The	GPS	400.2	26.20	10,486	0.0604%	3.51%	5.46%	0.0021%	0.0033%
General Dynamics Corp	GD	301.7	193.79	58,464	0.3365%	1.73%	8.55%	0.0058%	0.0288%
General Mills Inc	GIS	576.1	57.51	33,134	0.1907%	3.34%	8.10%	0.0064%	0.0154%
Genuine Parts Co	GPC	147.4	92.02	13,563	0.0781%	2.93%	10.32%	0.0023%	0.0081%

**Montana-Dakota Utilities Co.**

**Market DCF Calculation as of April 28, 2017**

		[1]	[2]	[3]	[4]				
		Dividend Yield	Dividend Yield x (1 + 0.625g)	Expected Growth Rate (g)	Secondary Market Investor Required Return				
<b>S&amp;P 500</b>		<b>2.39%</b>	<b>2.54%</b>	<b>10.00%</b>	<b>12.54%</b>				
		[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
Company	Ticker	Shares Outstanding (million)	Price	Market Capitalization (\$million)	Percent of Total Market Capitalization	Current Dividend Yield	Long-Term Growth Estimate	Market Capitalization-Weighted Dividend Yield	Market Capitalization-Weighted Long-Term Growth Estimate
WW Grainger Inc	GWV	58.4	192.70	11,255	0.0648%	2.66%	12.28%	0.0017%	0.0080%
Halliburton Co	HAL	867.9	45.88	39,818	0.2292%	1.57%	27.00%	0.0036%	0.0619%
Harley-Davidson Inc	HOG	175.6	56.81	9,977	0.0574%	2.57%	8.80%	0.0015%	0.0051%
Harris Corp	HRS	124.5	111.89	13,926	0.0000%	1.89%	n/a	0.0000%	n/a
HCP Inc	HCP	468.4	31.35	14,685	0.0000%	4.72%	-0.01897	0.0000%	0.0000%
Helmerich & Payne Inc	HP	108.6	60.64	6,583	0.0379%	4.62%	4.10%	0.0017%	0.0016%
Fortive Corp	FTV	346.6	63.26	21,925	0.1262%	0.44%	7.65%	0.0006%	0.0097%
Hershey Co/The	HSY	152.2	108.20	16,464	0.0948%	2.28%	9.97%	0.0022%	0.0094%
Synchrony Financial	SYF	810.8	27.80	22,540	0.1298%	1.87%	9.88%	0.0024%	0.0128%
Hormel Foods Corp	HRL	528.9	35.08	18,554	0.1068%	1.94%	4.07%	0.0021%	0.0043%
Arthur J Gallagher & Co	AJG	179.5	55.81	10,017	0.0577%	2.80%	9.95%	0.0016%	0.0057%
Mondelez International Inc	MDLZ	1,524.5	45.03	68,648	0.3952%	1.69%	11.04%	0.0067%	0.0436%
CenterPoint Energy Inc	CNP	431.0	28.53	12,295	0.0708%	3.75%	6.00%	0.0027%	0.0042%
Humana Inc	HUM	144.3	221.98	32,028	0.1844%	0.72%	12.53%	0.0013%	0.0231%
Willis Towers Watson PLC	WLTW	135.4	132.62	17,963	0.1034%	1.60%	11.90%	0.0017%	0.0123%
Illinois Tool Works Inc	ITW	345.7	138.09	47,733	0.2748%	1.88%	8.40%	0.0052%	0.0231%
Ingersoll-Rand PLC	IR	256.0	88.75	22,722	0.1308%	1.80%	10.30%	0.0024%	0.0135%
Foot Locker Inc	FL	131.2	77.34	10,150	0.0584%	1.60%	10.12%	0.0009%	0.0059%
Interpublic Group of Cos Inc/The	IPG	395.1	23.57	9,313	0.0536%	3.05%	9.21%	0.0016%	0.0049%
International Flavors & Fragrances Inc	IFF	79.0	138.59	10,945	0.0630%	1.85%	6.55%	0.0012%	0.0041%
Jacobs Engineering Group Inc	JEC	121.1	54.92	6,649	0.0383%	1.09%	8.49%	0.0004%	0.0032%
Hanesbrands Inc	HBI	372.5	21.81	8,124	0.0468%	2.75%	13.88%	0.0013%	0.0065%
Kellogg Co	K	350.1	71.00	24,854	0.1431%	2.93%	6.82%	0.0042%	0.0098%
Perrigo Co PLC	PRGO	143.4	73.94	10,601	0.0610%	0.87%	5.20%	0.0005%	0.0032%
Kimberly-Clark Corp	KMB	354.9	129.75	46,052	0.2651%	2.99%	6.99%	0.0079%	0.0185%
Kimco Realty Corp	KIM	425.7	20.29	8,637	0.0497%	5.32%	7.66%	0.0026%	0.0038%
Kohl's Corp	KSS	172.4	39.03	6,727	0.0387%	5.64%	5.42%	0.0022%	0.0021%
Oracle Corp	ORCL	4,114.7	44.96	184,996	1.0649%	1.69%	9.22%	0.0180%	0.0982%
Kroger Co/The	KR	914.2	29.65	27,107	0.1560%	1.62%	0.06662	0.0025%	0.0104%
Leggett & Platt Inc	LEG	133.0	52.54	6,987	0.0402%	2.59%	19.00%	0.0010%	0.0076%
Lennar Corp	LEN	203.2	50.50	10,260	0.0591%	0.32%	0.1009	0.0002%	0.0060%
Leucadia National Corp	LUK	359.8	25.39	9,135	0.0526%	0.98%	18.00%	0.0005%	0.0095%
Eli Lilly & Co	LLY	1,103.4	82.06	90,541	0.5212%	2.53%	12.65%	0.0132%	0.0659%
L Brands Inc	LB	284.8	52.81	15,041	0.0866%	4.54%	8.73%	0.0039%	0.0076%
Charter Communications Inc	CHTR	268.9	345.16	92,813	0.0000%	n/a	0.22327	n/a	0.0000%
Lincoln National Corp	LNC	225.5	65.93	14,869	0.0856%	1.76%	9.79%	0.0015%	0.0084%
Loews Corp	L	336.7	46.62	15,696	0.0000%	0.54%	n/a	0.0000%	n/a
Lowe's Cos Inc	LOW	857.3	84.88	72,770	0.4189%	1.65%	14.55%	0.0069%	0.0609%
Host Hotels & Resorts Inc	HST	737.9	17.95	13,246	0.0762%	4.46%	3.40%	0.0034%	0.0026%
Marsh & McLennan Cos Inc	MMC	514.2	74.13	38,115	0.2194%	1.83%	11.78%	0.0040%	0.0258%
Masco Corp	MAS	319.4	37.02	11,823	0.0681%	1.08%	13.68%	0.0007%	0.0093%
Mattel Inc	MAT	342.6	22.42	7,680	0.0442%	6.78%	25.65%	0.0030%	0.0113%
S&P Global Inc	SPGI	257.8	134.19	34,594	0.1991%	1.22%	11.00%	0.0024%	0.0219%
Medtronic PLC	MDT	1,368.9	83.09	113,741	0.6547%	2.07%	6.64%	0.0136%	0.0435%
CVS Health Corp	CVS	1,035.8	82.44	85,391	0.4915%	2.43%	12.09%	0.0119%	0.0594%
Micron Technology Inc	MU	1,106.3	27.67	30,612	0.0000%	n/a	10.00%	n/a	0.0000%
Motorola Solutions Inc	MSI	163.9	85.97	14,090	0.0811%	2.19%	4.65%	0.0018%	0.0038%
Murphy Oil Corp	MUR	172.5	26.18	4,517	0.0000%	3.82%	n/a	0.0000%	n/a
Mylan NV	MYL	535.5	37.35	20,001	0.0000%	n/a	6.47%	n/a	0.0000%
Laboratory Corp of America Holdings	LH	102.3	140.15	14,337	0.0000%	n/a	10.03%	n/a	0.0000%
Newell Brands Inc	NWL	483.1	47.74	23,063	0.1328%	1.59%	11.80%	0.0021%	0.0157%
Newmont Mining Corp	NEM	533.2	33.81	18,029	0.0000%	0.59%	-12.95%	0.0000%	0.0000%
Twenty-First Century Fox Inc	FOXA	1,052.3	30.54	32,138	0.1850%	1.18%	9.84%	0.0022%	0.0182%
NIKE Inc	NKE	1,321.5	55.41	73,225	0.4215%	1.30%	12.13%	0.0055%	0.0511%
NiSource Inc	NI	323.7	24.25	7,850	0.0452%	2.89%	6.38%	0.0013%	0.0029%
Noble Energy Inc	NBL	435.5	32.33	14,079	0.0810%	1.24%	10.62%	0.0010%	0.0086%
Norfolk Southern Corp	NSC	289.8	117.49	34,047	0.1960%	2.08%	11.67%	0.0041%	0.0229%
Eversource Energy	ES	316.9	59.40	18,823	0.1084%	3.20%	6.00%	0.0035%	0.0065%
Northrop Grumman Corp	NOC	174.6	245.96	42,938	0.2472%	1.46%	5.96%	0.0036%	0.0147%
Wells Fargo & Co	WFC	5,003.9	53.84	269,408	1.5508%	2.82%	11.03%	0.0438%	0.1710%
Nucor Corp	NUE	318.9	61.33	19,558	0.1126%	2.46%	6.63%	0.0028%	0.0075%
PVH Corp	PVH	78.2	101.03	7,901	0.0455%	0.15%	8.31%	0.0001%	0.0038%

Montana-Dakota Utilities Co.

Market DCF Calculation as of April 28, 2017

		[1]	[2]	[3]	[4]				
		Dividend Yield	Dividend Yield x (1 + 0.625g)	Expected Growth Rate (g)	Secondary Market Investor Required Return				
<b>S&amp;P 500</b>		<b>2.39%</b>	<b>2.54%</b>	<b>10.00%</b>	<b>12.54%</b>				
		[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
Company	Ticker	Shares Outstanding (million)	Price	Market Capitalization (\$million)	Percent of Total Market Capitalization	Current Dividend Yield	Long-Term Growth Estimate	Market Capitalization-Weighted Dividend Yield	Market Capitalization-Weighted Long-Term Growth Estimate
Occidental Petroleum Corp	OXY	764.6	61.54	47,052	0.0000%	4.94%	-1.99%	0.0000%	0.0000%
Omnicom Group Inc	OMC	232.9	82.12	19,127	0.1101%	2.68%	7.48%	0.0029%	0.0082%
ONEOK Inc	OKE	210.9	52.61	11,096	0.0639%	4.68%	25.10%	0.0030%	0.0160%
Raymond James Financial Inc	RJF	143.7	74.52	10,707	0.0616%	1.18%	13.50%	0.0007%	0.0083%
PG&E Corp	PCG	510.6	67.05	34,236	0.1971%	2.92%	6.50%	0.0058%	0.0128%
Parker-Hannifin Corp	PH	133.3	160.80	21,434	0.1234%	1.64%	9.81%	0.0020%	0.0121%
PPL Corp	PPL	680.8	38.11	25,945	0.1493%	4.15%	1.70%	0.0062%	0.0025%
PepsiCo Inc	PEP	1,428.5	113.28	161,821	0.9315%	2.66%	6.40%	0.0248%	0.0596%
Exelon Corp	EXC	925.8	34.63	32,059	0.1845%	3.78%	4.33%	0.0070%	0.0080%
ConocoPhillips	COP	1,237.1	47.91	59,267	0.3412%	2.21%	7.00%	0.0075%	0.0239%
PulteGroup Inc	PHM	315.5	22.67	7,152	0.0412%	1.59%	17.05%	0.0007%	0.0070%
Pinnacle West Capital Corp	PNW	111.6	85.09	9,492	0.0546%	3.08%	5.05%	0.0017%	0.0028%
PNC Financial Services Group Inc/The	PNC	486.2	119.75	58,217	0.3351%	1.84%	6.65%	0.0062%	0.0223%
PPG Industries Inc	PPG	256.7	109.84	28,191	0.1623%	1.46%	7.71%	0.0024%	0.0125%
Praxair Inc	PX	285.4	124.98	35,664	0.2053%	2.52%	9.97%	0.0052%	0.0205%
Progressive Corp/The	PGR	580.8	39.72	23,069	0.1328%	1.71%	10.26%	0.0023%	0.0136%
Public Service Enterprise Group Inc	PEG	506.2	44.05	22,299	0.1284%	3.90%	2.37%	0.0050%	0.0030%
Raytheon Co	RTN	291.1	155.21	45,178	0.2601%	2.06%	7.82%	0.0053%	0.0203%
Robert Half International Inc	RHI	127.2	46.05	5,859	0.0337%	2.08%	8.00%	0.0007%	0.0027%
Ryder System Inc	R	53.6	67.91	3,637	0.0209%	2.59%	15.00%	0.0005%	0.0031%
SCANA Corp	SCG	142.9	66.31	9,477	0.0546%	3.69%	5.30%	0.0020%	0.0029%
Edison International	EIX	325.8	79.97	26,055	0.1500%	2.71%	4.76%	0.0041%	0.0071%
Schlumberger Ltd	SLB	1,389.5	72.59	100,862	0.5806%	2.76%	36.05%	0.0160%	0.2093%
Charles Schwab Corp/The	SCHW	1,336.8	38.85	51,934	0.2990%	0.82%	18.17%	0.0025%	0.0543%
Sherwin-Williams Co/The	SHW	93.1	334.68	31,168	0.1794%	1.02%	13.65%	0.0018%	0.0245%
JM Smucker Co/The	SJM	116.4	126.72	14,755	0.0849%	2.37%	5.20%	0.0020%	0.0044%
Snap-on Inc	SNA	57.9	167.53	9,708	0.0559%	1.70%	9.80%	0.0009%	0.0055%
AMETEK Inc	AME	230.0	57.20	13,157	0.0757%	0.63%	9.35%	0.0005%	0.0071%
Southern Co/The	SO	995.2	49.80	49,562	0.2853%	4.66%	4.40%	0.0133%	0.0126%
BB&T Corp	BBT	811.4	43.18	35,035	0.2017%	2.78%	8.41%	0.0056%	0.0170%
Southwest Airlines Co	LUV	614.4	56.22	34,539	0.1988%	0.71%	10.28%	0.0014%	0.0204%
Stanley Black & Decker Inc	SWK	153.0	136.15	20,827	0.1199%	1.70%	11.00%	0.0020%	0.0132%
Public Storage	PSA	173.5	209.38	36,329	0.2091%	3.82%	6.06%	0.0080%	0.0127%
SunTrust Banks Inc	STI	491.4	56.81	27,917	0.1607%	1.83%	8.50%	0.0029%	0.0137%
Sysco Corp	SYU	540.2	52.87	28,561	0.1644%	2.50%	8.86%	0.0041%	0.0146%
Tesoro Corp	TSO	117.4	79.71	9,356	0.0539%	2.76%	10.00%	0.0015%	0.0054%
Texas Instruments Inc	TXN	999.6	79.18	79,151	0.4556%	2.53%	10.34%	0.0115%	0.0471%
Textron Inc	TXT	267.7	46.66	12,490	0.0719%	0.17%	9.66%	0.0001%	0.0069%
Thermo Fisher Scientific Inc	TMO	391.2	165.33	64,680	0.3723%	0.36%	11.98%	0.0014%	0.0446%
Tiffany & Co	TIF	124.8	91.65	11,436	0.0658%	1.96%	8.73%	0.0013%	0.0057%
TJX Cos Inc/The	TJX	644.6	78.64	50,688	0.2918%	1.59%	9.62%	0.0046%	0.0281%
Torchmark Corp	TMK	117.9	76.71	9,044	0.0521%	0.78%	7.57%	0.0004%	0.0039%
Total System Services Inc	TSS	183.4	57.31	10,508	0.0605%	0.70%	11.00%	0.0004%	0.0067%
Johnson Controls International plc	JCI	938.7	41.57	39,022	0.2246%	2.41%	10.50%	0.0054%	0.0236%
Ulta Beauty Inc	ULTA	62.1	281.44	17,488	0.0000%	n/a	22.56%	n/a	0.0000%
Union Pacific Corp	UNP	807.4	111.96	90,401	0.5204%	2.16%	9.82%	0.0112%	0.0511%
UnitedHealth Group Inc	UNH	964.1	174.88	168,604	0.9705%	1.43%	12.98%	0.0139%	0.1260%
Unum Group	UNM	228.2	46.33	10,573	0.0609%	1.73%	6.53%	0.0011%	0.0040%
Marathon Oil Corp	MRO	850.2	14.87	12,642	0.0728%	1.35%	8.60%	0.0010%	0.0063%
Varian Medical Systems Inc	VAR	93.5	90.74	8,480	0.0000%	n/a	n/a	n/a	n/a
Ventas Inc	VTR	354.9	64.01	22,714	0.1308%	4.84%	4.17%	0.0063%	0.0054%
VF Corp	VFC	414.5	54.63	22,645	0.1304%	3.08%	8.23%	0.0040%	0.0107%
Vornado Realty Trust	VNO	189.3	96.24	18,217	0.1049%	2.95%	4.32%	0.0031%	0.0045%
Vulcan Materials Co	VMC	132.6	120.88	16,033	0.0923%	0.83%	28.41%	0.0008%	0.0262%
Weyerhaeuser Co	WY	751.3	33.87	25,446	0.1465%	3.66%	7.50%	0.0054%	0.0110%
Whirlpool Corp	WHR	74.0	185.68	13,735	0.0791%	2.37%	15.88%	0.0019%	0.0126%
Williams Cos Inc/The	WMB	826.2	30.63	25,307	0.1457%	3.92%	10.00%	0.0057%	0.0146%
WEC Energy Group Inc	WEC	315.6	60.52	19,099	0.1099%	3.44%	6.23%	0.0038%	0.0068%
Xerox Corp	XRX	1,016.6	7.19	7,309	0.0421%	3.48%	1.80%	0.0015%	0.0008%
Adobe Systems Inc	ADBE	494.7	133.74	66,161	0.0000%	n/a	17.48%	n/a	0.0000%
AES Corp/VA	AES	659.3	11.31	7,457	0.0429%	4.24%	4.37%	0.0018%	0.0019%
Amgen Inc	AMGN	735.4	163.32	120,105	0.6914%	2.82%	6.81%	0.0195%	0.0471%

Montana-Dakota Utilities Co.

Market DCF Calculation as of April 28, 2017

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<b>S&amp;P 500</b>		<b>2.39%</b>	<b>2.54%</b>	<b>10.00%</b>	<b>12.54%</b>				
		[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
Company	Ticker	Shares Outstanding (million)	Price	Market Capitalization (\$million)	Percent of Total Market Capitalization	Current Dividend Yield	Long-Term Growth Estimate	Market Capitalization-Weighted Dividend Yield	Market Capitalization-Weighted Long-Term Growth Estimate
Apple Inc	AAPL	5,246.5	143.65	753,665	4.3384%	1.59%	10.63%	0.0689%	0.4613%
Autodesk Inc	ADSK	220.8	90.07	19,892	0.0000%	n/a	24.33%	n/a	0.0000%
Cintas Corp	CTAS	105.3	122.47	12,899	0.0743%	1.09%	11.15%	0.0008%	0.0083%
Comcast Corp	CMCSA	4,733.5	39.19	185,506	1.0678%	1.61%	10.31%	0.0172%	0.1101%
Molson Coors Brewing Co	TAP	194.7	95.89	18,672	0.1075%	1.71%	16.88%	0.0018%	0.0181%
KLA-Tencor Corp	KLAC	156.8	98.22	15,397	0.0886%	2.20%	4.20%	0.0019%	0.0037%
Marriott International Inc/MD	MAR	382.4	94.42	36,108	0.2079%	1.27%	13.19%	0.0026%	0.0274%
McCormick & Co Inc/MD	MKC	113.2	99.90	11,311	0.0651%	1.88%	7.86%	0.0012%	0.0051%
Nordstrom Inc	JWN	166.9	48.27	8,054	0.0464%	3.07%	7.63%	0.0014%	0.0035%
PACCAR Inc	PCAR	351.3	66.73	23,439	0.1349%	1.50%	6.73%	0.0020%	0.0091%
Costco Wholesale Corp	COST	438.9	177.52	77,921	0.4485%	1.13%	10.40%	0.0051%	0.0466%
Stryker Corp	SYK	373.8	136.37	50,970	0.2934%	1.25%	8.04%	0.0037%	0.0236%
Tyson Foods Inc	TSN	286.9	64.26	18,439	0.1061%	1.40%	6.30%	0.0015%	0.0067%
Applied Materials Inc	AMAT	1,079.8	40.61	43,852	0.2524%	0.99%	15.72%	0.0025%	0.0397%
Time Warner Inc	TWX	775.3	99.27	76,965	0.4430%	1.62%	9.30%	0.0072%	0.0412%
Bed Bath & Beyond Inc	BBBY	145.2	38.75	5,625	0.0324%	1.55%	5.64%	0.0005%	0.0018%
American Airlines Group Inc	AAL	492.6	42.62	20,994	0.0000%	0.94%	-2.71%	0.0000%	0.0000%
Cardinal Health Inc	CAH	315.5	72.59	22,899	0.1318%	2.47%	7.77%	0.0033%	0.0102%
Celgene Corp	CELG	780.8	124.05	96,861	0.0000%	n/a	20.68%	n/a	0.0000%
Cerner Corp	CERN	330.4	64.75	21,395	0.0000%	n/a	12.82%	n/a	0.0000%
Cincinnati Financial Corp	CINF	164.7	72.09	11,872	0.0000%	2.77%	n/a	0.0000%	n/a
DR Horton Inc	DHI	375.6	32.89	12,353	0.0711%	1.22%	11.77%	0.0009%	0.0084%
Flowserve Corp	FLS	130.5	50.87	6,638	0.0382%	1.49%	11.74%	0.0006%	0.0045%
Electronic Arts Inc	EA	308.3	94.82	29,230	0.0000%	n/a	11.27%	n/a	0.0000%
Express Scripts Holding Co	ESRX	593.5	61.34	36,407	0.0000%	n/a	11.99%	n/a	0.0000%
Expeditors International of Washington Inc	EXPD	180.7	56.09	10,135	0.0583%	1.43%	7.85%	0.0008%	0.0046%
Fastenal Co	FAST	289.3	44.68	12,924	0.0744%	2.86%	14.55%	0.0021%	0.0108%
M&T Bank Corp	MTB	153.8	155.41	23,896	0.1376%	1.93%	0.06573	0.0027%	0.0090%
Fiserv Inc	FISV	212.4	119.14	25,303	0.0000%	n/a	10.13%	n/a	0.0000%
Fifth Third Bancorp	FITB	750.6	24.43	18,338	0.1056%	2.29%	2.53%	0.0024%	0.0027%
Gilead Sciences Inc	GILD	1,307.2	68.55	89,611	0.0000%	3.03%	-0.33%	0.0000%	0.0000%
Hasbro Inc	HAS	125.0	99.11	12,389	0.0713%	2.30%	9.45%	0.0016%	0.0067%
Huntington Bancshares Inc/OH	HBAN	1,087.1	12.86	13,980	0.0805%	2.49%	10.35%	0.0020%	0.0083%
Welltower Inc	HCN	363.2	71.44	25,947	0.1494%	4.87%	4.59%	0.0073%	0.0069%
Biogen Inc	BIIB	212.1	271.21	57,528	0.0000%	n/a	7.70%	n/a	0.0000%
Range Resources Corp	RRC	247.6	26.49	6,559	0.0000%	0.30%	-10.13%	0.0000%	0.0000%
Northern Trust Corp	NTRS	229.5	90.00	20,654	0.1189%	1.69%	13.15%	0.0020%	0.0156%
Paychex Inc	PAYX	359.2	59.28	21,296	0.1226%	3.10%	9.00%	0.0038%	0.0110%
People's United Financial Inc	PBCT	343.5	17.47	6,001	0.0345%	3.95%	2.00%	0.0014%	0.0007%
Patterson Cos Inc	PDCO	97.1	44.49	4,321	0.0249%	2.34%	4.76%	0.0006%	0.0012%
QUALCOMM Inc	QCOM	1,477.4	53.74	79,397	0.4570%	4.24%	8.72%	0.0194%	0.0398%
Roper Technologies Inc	ROP	101.9	218.70	22,280	0.1283%	0.64%	12.87%	0.0008%	0.0165%
Ross Stores Inc	ROST	392.0	65.00	25,480	0.1467%	0.98%	12.45%	0.0014%	0.0183%
IDEXX Laboratories Inc	IDXX	88.1	167.73	14,781	0.0000%	n/a	10.42%	n/a	0.0000%
AutoNation Inc	AN	101.3	42.00	4,253	0.0000%	n/a	7.92%	n/a	0.0000%
Starbucks Corp	SBUX	1,457.4	60.06	87,531	0.5039%	1.67%	17.13%	0.0084%	0.0863%
KeyCorp	KEY	1,082.0	18.24	19,736	0.1136%	1.86%	7.42%	0.0021%	0.0084%
Staples Inc	SPLS	653.1	9.77	6,381	0.0367%	4.91%	0.0594	0.0018%	0.0022%
State Street Corp	STT	381.7	83.90	32,021	0.1843%	1.81%	9.70%	0.0033%	0.0179%
US Bancorp	USB	1,693.2	51.28	86,829	0.4998%	2.18%	8.78%	0.0109%	0.0439%
Symantec Corp	SYMC	618.8	31.63	19,574	0.1127%	0.95%	11.63%	0.0011%	0.0131%
T Rowe Price Group Inc	TROW	241.3	70.89	17,103	0.0985%	3.22%	12.15%	0.0032%	0.0120%
Waste Management Inc	WM	441.9	72.78	32,164	0.1852%	2.34%	10.77%	0.0043%	0.0199%
CBS Corp	CBS	370.0	66.56	24,626	0.1418%	1.08%	12.64%	0.0015%	0.0179%
Allergan PLC	AGN	335.5	243.86	81,814	0.4710%	1.15%	12.73%	0.0054%	0.0599%
Whole Foods Market Inc	WFM	318.6	36.37	11,586	0.0667%	1.54%	3.17%	0.0010%	0.0021%
Constellation Brands Inc	STZ	171.4	172.54	29,581	0.1703%	1.21%	17.83%	0.0021%	0.0304%
Xilinx Inc	XLNX	248.9	63.11	15,710	0.0904%	2.22%	8.84%	0.0020%	0.0080%
DENTSPLY SIRONA Inc	XRAY	230.2	63.24	14,557	0.0838%	0.55%	9.47%	0.0005%	0.0079%
Zions Bancorporation	ZION	202.4	40.03	8,103	0.0466%	0.80%	9.00%	0.0004%	0.0042%
Alaska Air Group Inc	ALK	123.7	85.09	10,525	0.0606%	1.41%	10.66%	0.0009%	0.0065%
Invesco Ltd	IVZ	406.9	32.94	13,402	0.0771%	3.52%	10.79%	0.0027%	0.0083%

Montana-Dakota Utilities Co.

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Company	Ticker	Shares Outstanding (million)	Price	Market Capitalization (\$million)	Percent of Total Market Capitalization	Current Dividend Yield	Long-Term Growth Estimate	Market Capitalization-Weighted Dividend Yield	Market Capitalization-Weighted Long-Term Growth Estimate
Intuit Inc	INTU	255.8	125.21	32,027	0.1844%	1.09%	14.78%	0.0020%	0.0272%
Morgan Stanley	MS	1,852.4	43.37	80,337	0.4625%	1.84%	14.87%	0.0085%	0.0688%
Microchip Technology Inc	MCHP	216.4	75.58	16,358	0.0942%	1.91%	17.52%	0.0018%	0.0165%
Chubb Ltd	CB	465.8	137.25	63,928	0.3680%	2.01%	10.63%	0.0074%	0.0391%
Hologic Inc	HOLX	279.3	45.15	12,610	0.0000%	n/a	10.22%	n/a	0.0000%
Chesapeake Energy Corp	CHK	908.0	5.26	4,776	0.0000%	n/a	-0.57%	n/a	0.0000%
Citizens Financial Group Inc	CFG	509.3	36.71	18,697	0.1076%	1.53%	19.13%	0.0016%	0.0206%
O'Reilly Automotive Inc	ORLY	91.6	248.15	22,742	0.0000%	n/a	15.50%	n/a	0.0000%
Allstate Corp/The	ALL	365.2	81.29	29,687	0.1709%	1.82%	9.70%	0.0031%	0.0166%
FLIR Systems Inc	FLIR	136.4	36.73	5,009	0.0000%	1.63%	n/a	0.0000%	n/a
Equity Residential	EQR	367.1	64.58	23,710	0.1365%	3.12%	9.04%	0.0043%	0.0123%
BorgWarner Inc	BWA	212.2	42.28	8,973	0.0516%	1.32%	6.13%	0.0007%	0.0032%
Newfield Exploration Co	NFX	199.0	34.62	6,888	0.0000%	n/a	20.39%	n/a	0.0000%
Incyte Corp	INCY	204.6	124.28	25,426	0.0000%	n/a	42.38%	n/a	0.0000%
Simon Property Group Inc	SPG	312.3	165.26	51,616	0.2971%	4.24%	7.87%	0.0126%	0.0234%
Eastman Chemical Co	EMN	145.8	79.75	11,630	0.0669%	2.56%	7.25%	0.0017%	0.0049%
AvalonBay Communities Inc	AVB	137.5	189.84	26,099	0.1502%	2.99%	6.96%	0.0045%	0.0105%
Prudential Financial Inc	PRU	430.4	107.03	46,063	0.2652%	2.80%	9.70%	0.0074%	0.0257%
United Parcel Service Inc	UPS	689.2	107.46	74,064	0.4263%	3.09%	8.50%	0.0132%	0.0362%
Apartment Investment & Management Co	AIV	157.0	43.74	6,868	0.0395%	3.29%	25.40%	0.0013%	0.0100%
Walgreens Boots Alliance Inc	WBA	1,081.0	86.54	93,545	0.5385%	1.73%	10.65%	0.0093%	0.0573%
McKesson Corp	MCK	212.1	138.29	29,325	0.1688%	0.81%	7.18%	0.0014%	0.0121%
Lockheed Martin Corp	LMT	289.4	269.45	77,990	0.4489%	2.70%	7.35%	0.0121%	0.0330%
AmerisourceBergen Corp	ABC	217.3	82.05	17,828	0.1026%	1.78%	9.46%	0.0018%	0.0097%
Capital One Financial Corp	COF	482.7	80.38	38,800	0.2233%	1.99%	4.52%	0.0044%	0.0101%
Waters Corp	WAT	80.1	169.89	13,604	0.0000%	n/a	7.51%	n/a	0.0000%
Dollar Tree Inc	DLTR	236.3	82.77	19,558	0.0000%	n/a	15.23%	n/a	0.0000%
Darden Restaurants Inc	DRI	124.3	85.19	10,592	0.0610%	2.63%	9.69%	0.0016%	0.0059%
NetApp Inc	NTAP	271.0	39.85	10,797	0.0622%	1.91%	10.16%	0.0012%	0.0063%
Citrix Systems Inc	CTXS	151.2	80.94	12,237	0.0000%	n/a	10.34%	n/a	0.0000%
Goodyear Tire & Rubber Co/The	GT	251.8	36.23	9,122	0.0000%	1.10%	n/a	0.0000%	n/a
DXC Technology Co	DXC	283.6	75.34	21,368	0.0000%	n/a	n/a	n/a	n/a
DaVita Inc	DVA	194.6	69.01	13,429	0.0000%	n/a	8.84%	n/a	0.0000%
Hartford Financial Services Group Inc/The	HIG	367.4	48.36	17,766	0.1023%	1.90%	9.50%	0.0019%	0.0097%
Iron Mountain Inc	IRM	264.1	34.76	9,181	0.0528%	6.33%	11.45%	0.0033%	0.0061%
Estee Lauder Cos Inc/The	EL	222.2	87.14	19,366	0.1115%	1.56%	10.82%	0.0017%	0.0121%
Yahoo! Inc	YHOO	958.1	48.21	46,191	0.0000%	n/a	10.37%	n/a	0.0000%
Principal Financial Group Inc	PFG	288.3	65.13	18,778	0.1081%	2.83%	9.53%	0.0031%	0.0103%
Stericycle Inc	SRCL	85.3	85.34	7,276	0.0000%	n/a	9.95%	n/a	0.0000%
Universal Health Services Inc	UHS	89.4	120.76	10,793	0.0621%	0.33%	9.49%	0.0002%	0.0059%
E*TRADE Financial Corp	ETFC	274.7	34.55	9,491	0.0000%	n/a	16.17%	n/a	0.0000%
Skyworks Solutions Inc	SWKS	184.5	99.74	18,401	0.1059%	1.12%	14.35%	0.0012%	0.0152%
National Oilwell Varco Inc	NOV	380.0	34.97	13,290	0.0000%	0.57%	n/a	0.0000%	n/a
Quest Diagnostics Inc	DGX	136.8	105.51	14,437	0.0831%	1.71%	8.51%	0.0014%	0.0071%
Activision Blizzard Inc	ATVI	753.6	52.25	39,374	0.2267%	0.57%	9.46%	0.0013%	0.0214%
Rockwell Automation Inc	ROK	128.6	157.35	20,235	0.1165%	1.93%	10.99%	0.0023%	0.0128%
Kraft Heinz Co/The	KHC	1,217.1	90.39	110,017	0.6333%	2.66%	10.03%	0.0168%	0.0635%
American Tower Corp	AMT	425.0	125.94	53,526	0.3081%	1.97%	17.98%	0.0061%	0.0554%
Regeneron Pharmaceuticals Inc	REGN	104.4	388.49	40,550	0.0000%	n/a	19.27%	n/a	0.0000%
Amazon.com Inc	AMZN	478.0	924.99	442,122	0.0000%	n/a	35.49%	n/a	0.0000%
Ralph Lauren Corp	RL	56.3	80.72	4,547	0.0262%	2.48%	1.46%	0.0006%	0.0004%
Boston Properties Inc	BXP	153.8	126.60	19,477	0.1121%	2.37%	5.36%	0.0027%	0.0060%
Amphenol Corp	APH	305.4	72.31	22,083	0.1271%	0.89%	10.03%	0.0011%	0.0127%
Arconic Inc	ARNC	440.6	27.33	12,043	0.0693%	0.88%	13.10%	0.0006%	0.0091%
Pioneer Natural Resources Co	PXD	170.2	172.99	29,439	0.1695%	0.05%	20.00%	0.0001%	0.0339%
Valero Energy Corp	VLO	448.7	64.61	28,993	0.1669%	4.33%	13.15%	0.0072%	0.0219%
Synopsys Inc	SNPS	150.5	73.70	11,092	0.0000%	n/a	9.36%	n/a	0.0000%
L3 Technologies Inc	LLL	77.9	171.77	13,377	0.0770%	1.75%	9.77%	0.0013%	0.0075%
Western Union Co/The	WU	476.2	19.86	9,458	0.0544%	3.52%	5.70%	0.0019%	0.0031%
CH Robinson Worldwide Inc	CHRW	141.8	72.70	10,307	0.0593%	2.48%	9.28%	0.0015%	0.0055%
Accenture PLC	ACN	620.1	121.30	75,216	0.4330%	2.00%	10.07%	0.0086%	0.0436%
TransDigm Group Inc	TDG	52.8	246.73	13,038	0.0000%	n/a	9.39%	n/a	0.0000%

Montana-Dakota Utilities Co.

Market DCF Calculation as of April 28, 2017

		[1]	[2]	[3]	[4]					
		Dividend Yield	Dividend Yield x (1 + 0.625g)	Expected Growth Rate (g)	Secondary Market Investor Required Return					
<b>S&amp;P 500</b>		<b>2.39%</b>	<b>2.54%</b>	<b>10.00%</b>	<b>12.54%</b>					
		[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	
Company	Ticker	Shares Outstanding (million)	Price	Market Capitalization (\$million)	Percent of Total Market Capitalization	Current Dividend Yield	Long-Term Growth Estimate	Market Capitalization-Weighted Dividend Yield	Market Capitalization-Weighted Long-Term Growth Estimate	
Yum! Brands Inc	YUM	352.3	65.75	23,162	0.1333%	1.83%	13.27%	0.0024%	0.0177%	
Prologis Inc	PLD	529.6	54.41	28,813	0.1659%	3.23%	5.09%	0.0054%	0.0084%	
FirstEnergy Corp	FE	443.7	29.94	13,286	0.0000%	4.81%	-0.30%	0.0000%	0.0000%	
VeriSign Inc	VRSN	101.5	88.92	9,023	0.0000%	n/a	9.30%	n/a	0.0000%	
Quanta Services Inc	PWR	148.6	35.44	5,265	0.0000%	n/a	16.80%	n/a	0.0000%	
Henry Schein Inc	HSIC	79.7	173.80	13,856	0.0000%	n/a	10.09%	n/a	0.0000%	
Ameren Corp	AEE	242.6	54.69	13,270	0.0764%	3.22%	6.00%	0.0025%	0.0046%	
Scripps Networks Interactive Inc	SNI	95.9	74.72	7,163	0.0412%	1.61%	7.56%	0.0007%	0.0031%	
NVIDIA Corp	NVDA	594.5	104.30	62,010	0.3570%	0.54%	9.40%	0.0019%	0.0336%	
Sealed Air Corp	SEE	195.3	44.02	8,598	0.0495%	1.45%	3.47%	0.0007%	0.0017%	
Cognizant Technology Solutions Corp	CTSH	589.0	60.23	35,475	0.2042%	1.00%	13.78%	0.0020%	0.0281%	
Intuitive Surgical Inc	ISRG	36.8	835.87	30,794	0.0000%	n/a	9.73%	n/a	0.0000%	
Affiliated Managers Group Inc	AMG	56.6	165.59	9,370	0.0539%	0.48%	14.31%	0.0003%	0.0077%	
Aetna Inc	AET	331.7	135.07	44,806	0.2579%	1.48%	11.72%	0.0038%	0.0302%	
Republic Services Inc	RSG	338.1	62.99	21,296	0.1226%	2.03%	9.48%	0.0025%	0.0116%	
eBay Inc	EBAY	1,082.3	33.41	36,161	0.0000%	n/a	9.52%	n/a	0.0000%	
Goldman Sachs Group Inc/The	GS	397.8	223.80	89,025	0.5125%	1.34%	7.16%	0.0069%	0.0367%	
Sempra Energy	SRE	250.6	113.02	28,323	0.1630%	2.91%	7.32%	0.0047%	0.0119%	
Moody's Corp	MCO	191.0	118.32	22,601	0.1301%	1.28%	8.00%	0.0017%	0.0104%	
Priceline Group Inc/The	PCLN	49.2	1,846.82	90,777	0.0000%	n/a	16.83%	n/a	0.0000%	
F5 Networks Inc	FFIV	64.8	129.13	8,366	0.0000%	n/a	12.21%	n/a	0.0000%	
Akamai Technologies Inc	AKAM	172.9	60.94	10,538	0.0000%	n/a	14.18%	n/a	0.0000%	
Reynolds American Inc	RAI	1,425.9	64.50	91,973	0.5294%	3.16%	8.09%	0.0167%	0.0428%	
Devon Energy Corp	DVN	525.7	39.49	20,758	0.1195%	0.61%	18.53%	0.0007%	0.0221%	
Alphabet Inc	GOOGL	297.6	924.52	275,151	0.0000%	n/a	16.26%	n/a	0.0000%	
Red Hat Inc	RHT	177.8	88.08	15,659	0.0000%	n/a	14.90%	n/a	0.0000%	
Allegion PLC	ALLE	95.3	78.64	7,493	0.0431%	0.81%	13.02%	0.0004%	0.0056%	
Netflix Inc	NFLX	431.0	152.20	65,599	0.0000%	n/a	36.35%	n/a	0.0000%	
Agilent Technologies Inc	A	322.3	55.05	17,743	0.1021%	0.96%	8.88%	0.0010%	0.0091%	
Anthem Inc	ANTM	265.0	177.89	47,138	0.2713%	1.46%	8.29%	0.0040%	0.0225%	
CME Group Inc	CME	339.8	116.19	39,480	0.2273%	2.27%	9.84%	0.0052%	0.0224%	
Juniper Networks Inc	JNPR	382.5	30.07	11,501	0.0662%	1.33%	9.32%	0.0009%	0.0062%	
BlackRock Inc	BLK	161.8	384.57	62,223	0.3582%	2.60%	13.87%	0.0093%	0.0497%	
DTE Energy Co	DTE	179.4	104.59	18,762	0.1080%	3.16%	5.50%	0.0034%	0.0059%	
Nasdaq Inc	NDAQ	166.1	68.87	11,442	0.0659%	2.21%	8.35%	0.0015%	0.0055%	
Philip Morris International Inc	PM	1,553.1	110.84	172,150	0.9910%	3.75%	9.47%	0.0372%	0.0938%	
salesforce.com Inc	CRM	711.3	86.12	61,260	0.0000%	n/a	25.53%	n/a	0.0000%	
MetLife Inc	MET	1,080.4	51.81	55,978	0.3222%	3.09%	7.04%	0.0100%	0.0227%	
Under Armour Inc	UA	220.2	19.41	4,275	0.0000%	n/a	11.28%	n/a	0.0000%	
Monsanto Co	MON	438.8	116.61	51,169	0.2945%	1.85%	10.10%	0.0055%	0.0297%	
Coach Inc	COH	280.6	39.39	11,053	0.0636%	3.43%	11.00%	0.0022%	0.0070%	
Fluor Corp	FLR	139.7	51.32	7,171	0.0413%	1.64%	16.85%	0.0007%	0.0070%	
CSX Corp	CSX	922.6	50.84	46,906	0.2700%	1.57%	9.90%	0.0042%	0.0267%	
Edwards Lifesciences Corp	EW	209.8	109.67	23,009	0.0000%	n/a	16.68%	n/a	0.0000%	
Ameriprise Financial Inc	AMP	153.9	127.85	19,672	0.1132%	2.60%	10.40%	0.0029%	0.0118%	
Xcel Energy Inc	XEL	507.8	45.05	22,875	0.1317%	3.20%	6.10%	0.0042%	0.0080%	
Rockwell Collins Inc	COL	162.4	104.09	16,902	0.0973%	1.27%	9.57%	0.0012%	0.0093%	
TechnipFMC PLC	FTI	466.6	30.13	14,058	0.0000%	n/a	-6.85%	n/a	0.0000%	
Zimmer Biomet Holdings Inc	ZBH	201.2	119.65	24,076	0.1386%	0.80%	8.38%	0.0011%	0.0116%	
CBRE Group Inc	CBG	337.9	35.81	12,099	0.0000%	n/a	10.23%	n/a	0.0000%	
Mastercard Inc	MA	1,053.9	116.32	122,592	0.7057%	0.76%	15.87%	0.0053%	0.1120%	
Signet Jewelers Ltd	SIG	68.3	65.84	4,497	0.0259%	1.88%	5.63%	0.0005%	0.0015%	
CarMax Inc	KMX	185.7	58.50	10,864	0.0000%	n/a	12.32%	n/a	0.0000%	
Intercontinental Exchange Inc	ICE	593.5	60.20	35,726	0.2057%	1.33%	11.30%	0.0027%	0.0232%	
Fidelity National Information Services Inc	FIS	329.7	84.19	27,759	0.1598%	1.38%	11.10%	0.0022%	0.0177%	
Chipotle Mexican Grill Inc	CMG	28.7	474.47	13,600	0.0000%	n/a	20.00%	n/a	0.0000%	
Wynn Resorts Ltd	WYNN	101.9	123.01	12,537	0.0722%	1.63%	17.20%	0.0012%	0.0124%	
Assurant Inc	AIZ	55.4	96.24	5,329	0.0307%	2.20%	21.41%	0.0007%	0.0066%	
NRG Energy Inc	NRG	316.1	16.90	5,342	0.0000%	0.71%	n/a	0.0000%	n/a	
Regions Financial Corp	RF	1,205.3	13.75	16,572	0.0954%	2.04%	8.95%	0.0019%	0.0085%	
Monster Beverage Corp	MNST	567.8	45.38	25,767	0.0000%	n/a	19.30%	n/a	0.0000%	
Teradata Corp	TDC	130.9	29.18	3,819	0.0000%	n/a	4.76%	n/a	0.0000%	

Montana-Dakota Utilities Co.

Market DCF Calculation as of April 28, 2017

		[1]	[2]	[3]	[4]				
		Dividend Yield	Dividend Yield x (1 + 0.625g)	Expected Growth Rate (g)	Secondary Market Investor Required Return				
<b>S&amp;P 500</b>		<b>2.39%</b>	<b>2.54%</b>	<b>10.00%</b>	<b>12.54%</b>				
		[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
Company	Ticker	Shares Outstanding (million)	Price	Market Capitalization (\$million)	Percent of Total Market Capitalization	Current Dividend Yield	Long-Term Growth Estimate	Market Capitalization-Weighted Dividend Yield	Market Capitalization-Weighted Long-Term Growth Estimate
Mosaic Co/The	MOS	351.0	26.93	9,453	0.0544%	4.08%	17.50%	0.0022%	0.0095%
Expedia Inc	EXPE	138.1	133.72	18,473	0.1063%	0.84%	19.18%	0.0009%	0.0204%
Discovery Communications Inc	DISCA	153.5	28.78	4,418	0.0000%	n/a	14.07%	n/a	0.0000%
CF Industries Holdings Inc	CF	233.2	26.74	6,235	0.0000%	4.49%	-0.05%	0.0000%	0.0000%
Viacom Inc	VIAB	347.5	42.56	14,788	0.0851%	1.88%	1.59%	0.0016%	0.0014%
Wyndham Worldwide Corp	WYN	104.4	95.31	9,946	0.0573%	2.43%	12.90%	0.0014%	0.0074%
Alphabet Inc	GOOG	347.0	905.96	314,336	0.0000%	n/a	16.26%	n/a	0.0000%
Mead Johnson Nutrition Co	MJN	183.6	88.72	16,293	0.0938%	1.86%	4.93%	0.0017%	0.0046%
Cooper Cos Inc/The	COO	48.9	200.33	9,803	0.0564%	0.03%	11.64%	0.0000%	0.0066%
TE Connectivity Ltd	TEL	355.0	77.37	27,468	0.1581%	1.91%	6.75%	0.0030%	0.0107%
Discover Financial Services	DFS	383.9	62.59	24,028	0.1383%	1.92%	6.91%	0.0027%	0.0096%
TripAdvisor Inc	TRIP	128.4	45.01	5,780	0.0000%	n/a	15.53%	n/a	0.0000%
Dr Pepper Snapple Group Inc	DPS	183.8	91.65	16,847	0.0970%	2.53%	8.58%	0.0025%	0.0083%
Visa Inc	V	1,846.3	91.22	168,415	0.9695%	0.72%	17.43%	0.0070%	0.1690%
Mid-America Apartment Communities Inc	MAA	113.6	99.21	11,268	0.0000%	3.51%	n/a	0.0000%	n/a
Xylem Inc/NY	XYL	179.7	51.41	9,238	0.0532%	1.40%	15.00%	0.0007%	0.0080%
Marathon Petroleum Corp	MPC	527.9	50.94	26,890	0.1548%	2.83%	16.55%	0.0044%	0.0256%
Level 3 Communications Inc	LVT	361.3	60.76	21,955	0.0000%	n/a	5.00%	n/a	0.0000%
Tractor Supply Co	TSCO	129.9	61.91	8,043	0.0463%	1.55%	13.80%	0.0007%	0.0064%
Mettler-Toledo International Inc	MTD	25.9	513.42	13,301	0.0000%	n/a	11.78%	n/a	0.0000%
Albemarle Corp	ALB	110.8	108.91	12,062	0.0694%	1.18%	11.60%	0.0008%	0.0081%
Transocean Ltd	RIG	390.9	11.03	4,312	0.0000%	n/a	-29.00%	n/a	0.0000%
Essex Property Trust Inc	ESS	65.6	244.47	16,027	0.0923%	2.86%	6.95%	0.0026%	0.0064%
GGP Inc	GGP	883.4	21.61	19,091	0.1099%	4.07%	5.90%	0.0045%	0.0065%
Realty Income Corp	O	273.1	58.35	15,933	0.0917%	4.34%	5.07%	0.0040%	0.0046%
Seagate Technology PLC	STX	296.6	42.13	12,497	0.0719%	5.98%	12.45%	0.0043%	0.0090%
WestRock Co	WRK	250.4	53.56	13,412	0.0772%	2.99%	7.31%	0.0023%	0.0056%
Western Digital Corp	WDC	288.1	89.07	25,658	0.1477%	2.25%	13.69%	0.0033%	0.0202%
Church & Dwight Co Inc	CHD	254.0	49.53	12,582	0.0724%	1.53%	9.02%	0.0011%	0.0065%
Federal Realty Investment Trust	FRT	72.2	130.89	9,447	0.0544%	2.99%	6.26%	0.0016%	0.0034%
Twenty-First Century Fox Inc	FOX	798.5	29.86	23,844	0.1373%	1.21%	9.84%	0.0017%	0.0135%
Alliant Energy Corp	LNT	227.8	39.32	8,958	0.0516%	3.20%	6.40%	0.0017%	0.0033%
JB Hunt Transport Services Inc	JBHT	110.0	89.66	9,861	0.0568%	1.03%	13.43%	0.0006%	0.0076%
Lam Research Corp	LRCX	161.3	144.85	23,366	0.1345%	1.24%	11.74%	0.0017%	0.0158%
Mohawk Industries Inc	MHK	74.3	234.79	17,445	0.0000%	n/a	7.01%	n/a	0.0000%
Pentair PLC	PNR	182.2	64.51	11,757	0.0677%	2.14%	5.96%	0.0014%	0.0040%
Vertex Pharmaceuticals Inc	VRTX	249.0	118.30	29,462	0.0000%	n/a	74.91%	n/a	0.0000%
Facebook Inc	FB	2,363.7	150.25	355,151	0.0000%	n/a	25.04%	n/a	0.0000%
United Rentals Inc	URI	84.5	109.66	9,268	0.0000%	n/a	15.17%	n/a	0.0000%
Alexandria Real Estate Equities Inc	ARE	91.1	112.51	10,247	0.0590%	2.95%	6.97%	0.0017%	0.0041%
United Continental Holdings Inc	UAL	314.5	70.21	22,082	0.0000%	n/a	1.90%	n/a	0.0000%
Delta Air Lines Inc	DAL	735.5	45.44	33,422	0.1924%	1.78%	11.44%	0.0034%	0.0220%
Navient Corp	NAVI	284.9	15.20	4,331	0.0249%	4.21%	8.00%	0.0010%	0.0020%
Mallinckrodt PLC	MNK	104.7	46.92	4,912	0.0000%	n/a	6.33%	n/a	0.0000%
News Corp	NWS	199.6	13.00	2,595	0.0149%	1.54%	10.73%	0.0002%	0.0016%
Centene Corp	CNC	172.3	74.40	12,817	0.0000%	n/a	13.22%	n/a	0.0000%
Regency Centers Corp	REG	169.8	63.18	10,730	0.0618%	3.23%	8.57%	0.0020%	0.0053%
Macerich Co/The	MAC	142.4	62.43	8,889	0.0512%	4.55%	8.51%	0.0023%	0.0044%
Martin Marietta Materials Inc	MLM	62.6	220.19	13,791	0.0794%	0.76%	0.2290%	0.0006%	0.0182%
Envision Healthcare Corp	EVHC	117.5	56.03	6,585	0.0000%	n/a	9.99%	n/a	0.0000%
PayPal Holdings Inc	PYPL	1,201.3	47.72	57,324	0.0000%	n/a	17.58%	n/a	0.0000%
Coty Inc	COTY	747.1	17.85	13,336	0.0768%	2.80%	1.89%	0.0022%	0.0015%
DISH Network Corp	DISH	227.0	64.44	14,625	0.0000%	n/a	2.99%	n/a	0.0000%
Alexion Pharmaceuticals Inc	ALXN	224.6	127.78	28,694	0.0000%	n/a	21.77%	n/a	0.0000%
News Corp	NWSA	381.9	12.72	4,857	0.0280%	1.57%	10.73%	0.0004%	0.0030%
Global Payments Inc	GPN	152.5	81.76	12,468	0.0718%	0.05%	0.12	0.0000%	0.0086%
Crown Castle International Corp	CCI	366.1	94.60	34,634	0.1994%	4.02%	19.97%	0.0080%	0.0398%
Delphi Automotive PLC	DLPH	269.3	80.40	21,651	0.1246%	1.44%	11.76%	0.0018%	0.0147%
Advance Auto Parts Inc	AAP	73.8	142.14	10,493	0.0604%	0.17%	13.56%	0.0001%	0.0082%
Michael Kors Holdings Ltd	KORS	162.4	37.33	6,064	0.0000%	n/a	0.74%	n/a	0.0000%
Illumina Inc	ILMN	146.0	184.86	26,990	0.0000%	n/a	14.61%	n/a	0.0000%
Acuity Brands Inc	AYI	44.1	176.10	7,765	0.0447%	0.30%	20.00%	0.0001%	0.0089%

**Montana-Dakota Utilities Co.**

**Market DCF Calculation as of April 28, 2017**

	[1]	[2]	[3]	[4]
	Dividend Yield	Dividend Yield x (1 + 0.625g)	Expected Growth Rate (g)	Secondary Market Investor Required Return
<b>S&amp;P 500</b>	<b>2.39%</b>	<b>2.54%</b>	<b>10.00%</b>	<b>12.54%</b>

Company	Ticker	Shares Outstanding (million)	Price	Market Capitalization (\$million)	Percent of Total Market Capitalization	Current Dividend Yield	Long-Term Growth Estimate	Market Capitalization-Weighted Dividend Yield	Market Capitalization-Weighted Long-Term Growth Estimate
								[11]	[12]
Alliance Data Systems Corp	ADS	55.9	249.63	13,949	0.0803%	0.83%	14.50%	0.0007%	0.0116%
LKQ Corp	LKQ	308.2	31.24	9,629	0.0000%	n/a	15.00%	n/a	0.0000%
Nielsen Holdings PLC	NLSN	357.3	41.13	14,696	0.0846%	3.31%	10.67%	0.0028%	0.0090%
Garmin Ltd	GRMN	188.1	50.84	9,562	0.0550%	4.01%	2.45%	0.0022%	0.0013%
Cimarex Energy Co	XEC	95.1	116.68	11,098	0.0639%	0.27%	77.89%	0.0002%	0.0498%
Zoetis Inc	ZTS	491.6	56.11	27,585	0.1588%	0.75%	12.25%	0.0012%	0.0195%
Digital Realty Trust Inc	DLR	159.458	114.84	18,312	0.1054%	3.24%	5.10%	0.0034%	0.0054%
Equinix Inc	EQIX	77.912	417.7	32,544	0.1873%	1.92%	24.61%	0.0036%	0.0461%
Discovery Communications Inc	DISCK	228.764	27.98	6,401	0.0000%	n/a	14.07%	n/a	0.0000%

**Average for Companies Paying Dividends with Positive Best Long-Term Growth Estimates** **2.24%** **10.07%**

Notes:

- [1] Equals sum of Column [11]
- [2] Equals Column [1] x (1 + 0.625 x Column [3])
- [3] Equals sum of Column [12]
- [4] Equals Column [2] + Column [3]
- [5] Source: Bloomberg Finance L.P.
- [6] Source: Bloomberg Finance L.P.
- [7] Equals Column [5] x Column [6]
- [8] Equals percent of sum of Column [7] if Current Dividend Yield does not equal "n/a" and BEst Long-Term Growth Estimate does not equal "n/a" and is greater than 0%
- [9] Source: Bloomberg Finance L.P.
- [10] Source: Bloomberg Finance L.P.
- [11] Equals Column [8] x Column [9]
- [12] Equals Column [8] x Column [10]

**Montana-Dakota Utilities Co.**  
**Beta**  
**As of April 28, 2017**

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Company	Ticker	Value Line
Atmos Energy Corporation	ATO	0.70
New Jersey Resources Corporation	NJR	0.80
NiSource Inc.	NI	NMF
Northwest Natural Gas Company	NWN	0.65
South Jersey Industries, Inc.	SJI	0.80
Southwest Gas Corporation	SWX	0.75
Spire Inc.	SR	0.70
Mean		0.73

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Source: Value Line; dated March 3, 2017

**Montana-Dakota Utilities Co.**

**Adjusted CAPM Return  
As of April 28, 2017**

Company	Ticker	[1] S&P Current Market DCF Return	[2] Near-term projected T- Bond Yield	[3] Market Risk Premium	[4] Value Line Beta	[5] B*RP	[6] Plus: Projected T- Bond Yield	[7] Biased CAPM Return	[8] Ibbotson CAPM Adjustment	[9] Unbiased CAPM
Atmos Energy Corporation	ATO	12.54%	3.52%	9.02%	0.70	6.31%	3.52%	9.83%	0.89%	10.72%
New Jersey Resources Corporation	NJR	12.54%	3.52%	9.02%	0.80	7.22%	3.52%	10.73%	1.51%	12.24%
NiSource Inc.	NI	12.54%	3.52%	9.02%	NMF	6.61%	3.52%	10.13%	0.89%	11.02%
Northwest Natural Gas Company	NWN	12.54%	3.52%	9.02%	0.65	5.86%	3.52%	9.38%	1.66%	11.04%
South Jersey Industries, Inc.	SJI	12.54%	3.52%	9.02%	0.80	7.22%	3.52%	10.73%	1.51%	12.24%
Southwest Gas Corporation	SWX	12.54%	3.52%	9.02%	0.75	6.76%	3.52%	10.28%	0.98%	11.26%
Spire Inc.	SR	12.54%	3.52%	9.02%	0.70	6.31%	3.52%	9.83%	1.51%	11.34%
								<b>10.73%</b>		<b>12.24%</b>
								<b>10.13%</b>		<b>11.26%</b>
								<b>9.38%</b>		<b>10.72%</b>

**High**  
**Median**  
**Low**

Notes

- [1] S&P 500 Market Return as of 4/28/2017; dividend yield adjustment factor sets at (1+0.625g); excludes companies with zero dividend and negative growth rate.
- [2] Near-term projected 30-year U.S. Treasury bond yield (Q2 2017 - Q3 2018); Blue Chip Financial Forecasts, Vol.36, No.4, April 1, 2017 at 2.
- [3] = [1] - [2]
- [4] Value Line; dated March 3, 2017
- [5] = [3] x [4] (For NI, use average Value Line Beta)
- [6] = [2]
- [7] = [5] + [6]
- [8] See Schedule 8 page 2
- [9] = [7] + [8]

## Montana-Dakota Utilities Co.

### Adjusted CAPM Return As of April 28, 2017

Company	Ticker	[10] Shares (million)	[11] Price/Share	[12] Market Capitalization (million)	[13] Size Decile	[14] Ibbotson CAPM Size Adjustment
Atmos Energy Corporation	ATO	105.18	\$ 81.02	\$ 8,521	3	0.89%
New Jersey Resources Corporation	NJR	86.31	\$ 40.35	\$ 3,483	5	1.51%
NiSource Inc.	NI	323.70	\$ 24.25	\$ 7,850	3	0.89%
Northwest Natural Gas Company	NWN	28.64	\$ 59.60	\$ 1,707	6	1.66%
South Jersey Industries, Inc.	SJI	79.52	\$ 37.52	\$ 2,983	5	1.51%
Southwest Gas Corporation	SWX	47.55	\$ 83.76	\$ 3,983	4	0.98%
Spire Inc.	SR	45.74	\$ 68.55	\$ 3,135	5	1.51%
					<b>Average</b>	<b>1.28%</b>

Notes

[10] Bloomberg: dated April 28, 2017.

[11] Bloomberg: dated April 28, 2017.

[12] = [10] x [11]

[13] Duff & Phelps 2017 Valuation Hand Book – U.S. Guide to Cost of Capital Exhibit 7.2.

[14] Duff & Phelps 2017 Valuation Hand Book – U.S. Guide to Cost of Capital Exhibit 4.7.

**Montana-Dakota Utilities Co.**

**Selected Natural Gas Distribution Companies  
 Non-Volumetric Rate Design**

Company	Ticker	Utility	State	Revenue		Formula		Straight		Non-Volumetric	
				Decoupling Mechanism	[1]	Rate Plan	[1]	Fixed-Variab Rate Design	[1]	Rate Design	[2]
Atmos Energy Corporation	ATO	Atmos Energy Corporation	CO	N	N	N	N	N	N	N	N
		Atmos Energy Corporation	KS	N	N	N	N	N	N	N	N
		Atmos Energy Corporation	KY	N	N	N	N	N	N	N	N
		Atmos Energy Corporation	LA	N	N	Y	N	N	N	Y	Y
		Atmos Energy Corporation	MS	N	N	Y	N	N	N	Y	Y
		Atmos Energy Corporation	TN	N	N	Y	N	N	N	Y	Y
		Atmos Energy Corporation (Mid-Tex)	TX	N	N	Y	N	N	N	Y	Y
		Atmos Energy Corporation	VA	N	N	N	N	N	N	N	N
New Jersey Resources Corporation	NJR	New Jersey Natural Gas Company	NJ	Y	N	N	N	N	N	Y	Y
NiSource Inc.	NI	Northern Indiana Public Service	IN	N	N	N	N	N	N	N	N
		Columbia Gas of Kentucky	KY	N	N	N	N	N	N	N	N
		Columbia Gas of Maryland	MD	Y	Y	N	N	N	N	Y	Y
		Columbia Gas of Massachusetts	MA	Y	Y	N	N	N	N	Y	Y
		Columbia Gas of Ohio	OH	N	N	N	N	Y	Y	Y	Y
		Columbia Gas of Pennsylvania	PA	N	N	N	N	N	N	N	N
		Columbia Gas of Virginia	VA	Y	Y	N	N	N	N	Y	Y
Northwest Natural Gas Company	NWN	Northwest Natural Gas Company	OR	Y	Y	N	N	N	N	Y	Y
		Northwest Natural Gas Company	WA	N	N	N	N	N	N	N	N
South Jersey Industries, Inc.	SJI	South Jersey Gas Company	NJ	Y	Y	N	N	N	N	Y	Y
Southwest Gas Corporation	SWX	Southwest Gas Corporation	AZ	Y	Y	N	N	N	N	Y	Y
		Southwest Gas Corporation	CA	Y	Y	N	N	N	N	Y	Y
		Southwest Gas Corporation	NV	Y	Y	N	N	N	N	Y	Y
Spire, Inc.	SR	Alabama Gas Company	AL	N	N	Y	Y	N	N	Y	Y
		Laclede Gas Company	MO	N	N	N	N	Y	Y	Y	Y
		Missouri Gas Energy	MO	N	N	N	N	Y	Y	Y	Y
		Mobile Gas Service Corporation	AL	N	N	Y	Y	N	N	Y	Y
		Willmut Gas & Oil Company	MS	N	N	N	N	N	N	N	N

**Total Number of Jurisdictions (Y)** 18  
**Total Number of Jurisdictions** 27  
**Percent of Jurisdictions** 66.7%

Notes:

[1] Source: American Gas Association, Innovative Rates, Non-Volumetric Rates, and Tracking Mechanisms: Current List, December 2016.

[2] Identifies companies with either a formula rate plan, revenue decoupling mechanism or straight fixed-variable rate design.

**Montana-Dakota Utilities Co.**

**Selected Natural Gas Distribution Companies  
Capital Structures as of March 31, 2017**  
*\$ millions*

Company	Ticker	Short-Term		Long-Term		Preferred		Common		Total Capital
		Debt	%	Debt	%	Stock	%	Equity	%	
Atmos Energy Corporation	ATO	\$ 670.6	9.49%	\$ 2,564.6	36.27%	-	0.00%	\$ 3,834.9	54.24%	\$ 7,070 1/
New Jersey Resources Corporation	NJR	237.9	9.12%	1,084.7	41.58%	-	0.00%	1,286.3	49.30%	\$ 2,609 1/
NISource Inc.	NI	1,514.2	12.51%	6,400.0	52.87%	-	0.00%	4,191.1	34.62%	\$ 12,105 1/
Northwest Natural Gas Company	NWN	-	0.00%	719.7	45.14%	-	0.00%	874.6	54.86%	\$ 1,594 1/
South Jersey Industries, Inc.	SJI	205.1	7.82%	1,111.2	42.34%	-	0.00%	1,307.9	49.84%	\$ 2,624 1/
Southwest Gas Corporation	SWX	-	0.00%	1,590.2	48.11%	-	0.00%	1,715.4	51.89%	\$ 3,306 1/
Spire Inc.	SR	567.4	12.97%	1,925.3	44.00%	-	0.00%	1,883.0	43.03%	\$ 4,376 1/
<b>Median</b>			<b>9.12%</b>		<b>44.00%</b>		<b>0.00%</b>		<b>49.84%</b>	
MDU North Dakota Gas			5.97%		43.04%		0.00%		51.00%	2/

1/ Source: SNL Financial; quarterly data as of March 31, 2017.

2/ Source: Montana-Dakota Utilities Co. - North Dakota Natural Gas Operations