

Rebuttal Testimony and Schedules  
Ann E. Bulkley

Before the North Dakota Public Service Commission  
State of North Dakota

In the Matter of the Application of Northern States Power Company  
for Authority to Increase Rates for Electric Utility  
Service in North Dakota

Case No. PU-12-813  
Exhibit\_\_\_(AEB-2)

**Return on Equity**

August 12, 2013

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1 **I. INTRODUCTION AND QUALIFICATIONS**

2

3 Q. PLEASE STATE YOUR NAME AND EMPLOYER.

4 A. My name is Ann E. Bulkley. I am employed by Concentric Energy Advisors  
5 (Concentric) as a Vice President.

6

7 Q. ON WHOSE BEHALF ARE YOU SUBMITTING THIS REBUTTAL TESTIMONY?

8 A. I am submitting this Rebuttal Testimony on behalf of Northern States  
9 Power Company, a Minnesota corporation operating in North Dakota  
10 (NSPM or the Company). NSPM is a wholly-owned subsidiary of Xcel  
11 Energy Inc. (XEI).

12

13 Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

14 A. The purpose of my Rebuttal Testimony is to respond to the Direct  
15 Testimony of Mr. Charles W. King regarding the appropriate return on  
16 equity (ROE) and capital structure for NSPM to be determined by the North  
17 Dakota Public Service Commission (the Commission) in this proceeding.

18

19 Q. HAVE YOU PREPARED ANY EXHIBITS TO SUPPORT YOUR ANALYSIS AND  
20 RECOMMENDATIONS?

21 A. Yes. My updated analysis and recommendations are supported by the data  
22 presented in Exhibit\_\_ (AEB-2), Schedules 1 through 15, which have been  
23 prepared by me or under my direction.

24

25 Q. HOW IS THE REMAINDER OF YOUR REBUTTAL TESTIMONY ORGANIZED?

26 A. The remainder of my Rebuttal Testimony is organized as follows:

- 1 • In Section II, I provide a summary and overview of my Rebuttal  
2 Testimony.
- 3 • In Section III, I discuss the important factors to be considered in  
4 establishing the ROE, including a review of current capital market  
5 conditions and their implications for the ROE in this proceeding.
- 6 • In Section IV, I provide updated analyses and recommendations  
7 regarding the Company's ROE.
- 8 • In Section V, I respond to Mr. King's analyses and recommendations.
- 9 • In Section VI, I discuss my conclusions and recommendations on the  
10 Company's capital structure and cost of short term debt.
- 11 • Finally, in Section VII, I summarize my conclusions and  
12 recommendations.

## 13 14 **II. SUMMARY AND OVERVIEW**

15 Q. PLEASE SUMMARIZE YOUR CONCLUSIONS REGARDING THE APPROPRIATE  
16 ROE FOR NSPM.

17 A. Selecting the appropriate ROE is not simply a matter of performing the  
18 calculations of the traditional ROE models, but rather a matter of judgment,  
19 as the Commission has recognized in prior cases. While the analytical results  
20 of ROE estimation models provide a starting point, it is necessary to  
21 consider other factors in determining the appropriate ROE, including the  
22 applicable standards, market conditions, and investor expectations. Based on  
23 those factors, I believe that a reasonable range for the return on equity for  
24 NSPM is between 10.00 percent and 10.50 percent. Within that range, a

1           10.25 percent ROE is somewhat conservative in my view, but is within the  
2 range of results produced my updated analyses.

3  
4           *Applicable standards.* The applicable standards for selecting an ROE include:  
5 (i) consistency with returns available from other businesses having  
6 comparable risks; (ii) adequacy of the ROE to support the utility's financial  
7 integrity and access to capital at reasonable rates; (iii) and the overall  
8 reasonableness of the end results, as opposed to the theory or model  
9 applied.<sup>1</sup> As discussed further later in my Rebuttal Testimony, the selection  
10 of the appropriate ROE is the result of sound judgment, not the result of a  
11 mathematical calculation.

12  
13           *Market conditions.* Estimating the Cost of Equity is a forward-looking  
14 exercise, which means that it is reasonable to consider not only current  
15 market conditions but prospective market conditions. Recent market  
16 conditions and Federal Reserve monetary policy have resulted in  
17 unsustainably low interest rates. As a result, it is important to take into  
18 account the likelihood that borrowing costs will increase rather significantly  
19 in the near to intermediate term during which the ROE set in this case might  
20 be in effect. The likelihood of increasing interest rates represents a  
21 significant risk for dividend paying stocks, such as electric and gas utilities, as  
22 interest rates on government and corporate bonds increase and become  
23 more competitive with dividend yields. That risk should be considered in  
24 selecting the ROE in this case. Furthermore, the ROE should not be set at a

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<sup>1</sup> *Bluefield Waterworks and Improvement Co., v. Public Service Commission of West Virginia*, 262 U.S. 679 (1923); *Federal Power Commission v. Hope Natural Gas Co.*, 320 U.S. 591 (1944).

1 level so low that a financial incentive for quickly re-filing a rate case would  
2 result.

3  
4 There are some differences in market conditions since the Company's last  
5 rate proceeding; some indicating higher risk, and others indicating lower risk.  
6 On balance, market conditions today are generally similar to those in  
7 February 2012 and do not support a significant reduction in the Company's  
8 authorized ROE, much less the 140 basis point reduction recommended by  
9 Mr. King.

10  
11 *Investor expectations.* It is important to consider investor return expectations.  
12 As I explain later in my Rebuttal Testimony, the Commission has recognized  
13 that the collective judgment of investors is the most critical test of whether  
14 an ROE is adequate.

15  
16 Authorized returns in other regulatory jurisdictions provide a readily  
17 observable benchmark for returns available from investments in other  
18 utilities. It is clear that investors are interested in authorized ROEs. For  
19 example, in a recent report on regulated and diversified utilities, Morgan  
20 Stanley commented on Xcel Energy's allowed ROEs as follows:

21 Unlike many of its larger peers, XEL's allowed ROEs, in the  
22 mid-to-low 10% range, have only modest risk. These ROE  
23 levels are consistent with the US average, and recent decisions  
24 have pointed toward them remaining this way, but we continue  
25 to watch them in a handful of pending rate cases this year.<sup>2</sup>  
26

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<sup>2</sup> Morgan Stanley Research North America, "Regulated and Diversified Utilities/IPPs, Refreshing Estimates and Price Targets; Outlook Unchanged," July 8, 2013, at 8.

1 While Mr. King believes that authorized ROEs are too high in general and  
2 urges the Commission to take a very different approach than other state  
3 commissions. Utility investors have many alternatives, and utilities such as  
4 NSPM must compete for their investment dollars. Utility investors compare  
5 the returns that can be obtained at a given level of risk and have no incentive  
6 to make investments in states with low authorized returns when higher  
7 returns are available elsewhere for comparable risk. If the Commission  
8 follows Mr. King's advice, utility investors will recognize that the authorized  
9 return for NSP in North Dakota will be at the very bottom of authorized  
10 ROEs for integrated electric utilities.

11  
12 As I demonstrate later in my Rebuttal Testimony, the average authorized  
13 return for integrated electric utilities for the period from January 2012  
14 through July 2013 was 10.04 percent, which is 104 basis points above Mr.  
15 King's recommended ROE. Further, 50 of the 51 cases decided in that  
16 period have awarded authorized ROEs exceeding the level recommended by  
17 Mr. King.

18  
19 Recent experience shows that investors will downgrade their assessments of  
20 state jurisdictions as a place for utility investments as a result of extreme  
21 outlier ROE awards. For example, in 2012, after the South Dakota Public  
22 Utilities Commission authorized a 9.25 percent ROE for NSP, Regulatory  
23 Research Associates ("RRA") downgraded the South Dakota regulatory  
24 jurisdiction from "Average/2" to "Average/3". RRA indicates that these  
25 rankings are "assigned from an investor perspective and indicate the relative  
26 regulatory risk associated with the ownership of securities issued by the  
27 jurisdiction's utilities. The evaluation reflects our assessment of the probable

1 level and quality of the earnings to be realized by the state's utilities as a  
2 result of regulatory, legislative, and court actions".<sup>3</sup> RRA's specific  
3 commentary reflects concerns about low authorized ROEs. RRA states that  
4 "[W]e view the South Dakota regulatory environment as somewhat  
5 restrictive from an investor viewpoint. Recent decisions rendered by the  
6 PUC have contained equity returns that have been below industry  
7 averages."<sup>4</sup>

8  
9 Investor ratings of utility commissions are important to ratepayers because a  
10 downgrade of a jurisdiction's regulatory rating is significant to investors who  
11 are concerned with a utility's business risk. For a utility, the regulatory  
12 environment is an important part of a company's overall business risk. A  
13 decrease in a jurisdiction's regulatory rating means an increase in business  
14 risk for the regulated companies operating in that jurisdiction. That  
15 increased risk could lead to an increase in the cost of capital and cost of  
16 providing service. It is reasonable to expect that an increase in the cost of  
17 capital will have more long-run implications when a utility is in the midst of  
18 a significant capital investment plan because the costs of borrowing will  
19 remain in place for a long time.

20  
21 Investors continue to regard North Dakota as a constructive regulatory  
22 environment, in part because the North Dakota Commission has historically  
23 responded to changing market conditions with moderate adjustments to the  
24 allowed ROE. For example, in 2007 NSPM's authorized ROE was 10.75  
25 percent. In the Company's most recent case, in 2012, the Commission

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<sup>3</sup> SNL Financial, South Dakota Public Utilities Commission profile, Accessed August 5, 2013.

<sup>4</sup> *Ibid.*

1 authorized a 10.40 percent ROE, which was a 35 basis point reduction.  
2 Over that period, interest rates declined 209 basis points.  
3

4 While there may be some controversy regarding certain of the investments  
5 being made by the Company, it is clear that NSPM is making very substantial  
6 investments in its nuclear and fossil generation and to refresh and upgrade  
7 the infrastructure needed to provide safe and reliable service. Investors are  
8 very sensitive to the question of whether there is regulatory support for  
9 utility investment, and the long run cost of capital can be adversely affected  
10 if investors perceive a reduction of such support.  
11

12 *Results of ROE estimation models.* A ROE range of 10.00 percent to 10.50  
13 percent and an ROE of 10.25 percent are reasonable and appropriate  
14 considering current market conditions, the expectation of and risk associated  
15 with rising interest rates, and my updated analysis as shown in Table 1.

1  
2

**Table 1**  
**Updated Analytical Results<sup>5</sup>**

<b>Constant Growth DCF - Including Flotation Costs</b>				
	Mean (Low Growth)	Mean	Mean (High Growth)	
30-Day Average Price	8.47%	9.73%	11.34%	
90-Day Average Price	8.32%	9.58%	11.19%	
180-Day Average Price	8.49%	9.75%	11.36%	
<b>Multi-Stage DCF - Including Flotation Costs</b>				
	Mean (Low Growth)	Mean	Mean (High Growth)	
30-Day Average Price	9.64%	9.98%	10.52%	
90-Day Average Price	9.50%	9.83%	10.35%	
180-Day Average Price	9.67%	10.02%	10.55%	
<b>Capital Asset Pricing Model</b>				
	Current Risk-Free Rate (3.46%)	2013-2014 Projected Risk Free Rate (3.73%)	2015-2019 Projected Risk Free Rate (5.20%)	Mean
Bloomberg Beta	10.56%	10.64%	11.04%	10.74%
Value Line Beta	10.41%	10.49%	10.91%	10.60%
<b>Bond Yield Plus Risk Premium</b>				
Risk Premium	10.17%	10.28%	10.87%	10.44%

3 Q. WHAT FACTORS SUPPORT A 10.25 PERCENT ROE IN THIS CASE?

4 A. A 10.25 percent ROE:

- 5       • Is supported by my updated analyses which is summarized above;
- 6       • Is consistent with the ROEs awarded by other state jurisdictions, which
- 7       is significant to investors and a useful benchmark of comparability to
- 8       other similar investments;

<sup>5</sup> See Exhibit \_\_\_\_ (AEB-2), Schedules 1-5.

- 1 • Will support the Company's ability to attract capital to finance
- 2 investments at reasonable rates, which will provide long term benefits
- 3 to ratepayers by limiting the long term cost of capital;
- 4 • Will be consistent with the Commission's past practice of preserving
- 5 stability by making gradual adjustments to ROEs, which will maintain
- 6 investor confidence and also contribute to long run costs of capital; and
- 7 • Balances shareholder and ratepayer interests.

8  
9 Q. PLEASE PROVIDE AN OVERVIEW OF MR. KING'S ROE RECOMMENDATION IN  
10 THIS PROCEEDING.

11 A. Mr. King recommends an ROE for NSPM of 9.00 percent, including seven  
12 basis points for flotation costs, based on the results of his analyses. Mr.  
13 King does not offer a range of results for his proxy group. He does,  
14 however, present the results of five different analyses that he conducted to  
15 estimate the Cost of Equity for NSPM. Those results range from 7.97  
16 percent (the median for his sustainable growth DCF analysis) to 10.02  
17 percent (the average of recent ROE awards in other jurisdictions). Mr. King  
18 then assigns a weight to each of his results in order to calculate an overall  
19 ROE for the proxy group which he recommends for the Company.

20  
21 Q. HOW DOES MR. KING'S ROE RECOMMENDATION COMPARE TO RECENT  
22 AVERAGE AUTHORIZED ROES?

23 A. The average authorized ROE for vertically-integrated electric utilities from  
24 January 2012–July 2013 was 10.04 percent.<sup>6</sup> The Company is a vertically  
25 integrated utility. In the development of our respective proxy groups, both

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<sup>6</sup> Source: SNL Financial. See Exhibit \_\_\_\_ (AEB-2), Schedule 13.

1 Mr. King and I agree that a risk comparable proxy group for NSPM includes  
2 only companies that own generation.<sup>7</sup> As a result, the authorized return  
3 analysis for NSPM should also focus on vertically integrated utilities.  
4

5 Q. DO THE DECISIONS OF OTHER REGULATORY COMMISSIONS PROVIDE A  
6 USEFUL BENCHMARK FOR COMPARABILITY TO OTHER INVESTMENTS?

7 A. Yes. It is a fundamental regulatory principle that authorized ROEs must be  
8 comparable to other investments of commensurate risk. The regulatory  
9 decisions of other Commissions provide a basic test of reasonableness and a  
10 benchmark that investors consider in assessing the authorized ROE against  
11 the returns available from other regulated utilities with comparable risk.  
12

13 As shown on the Chart 1 below, 50 out of 51 cases during this time period  
14 have been above Mr. King's recommended return.<sup>8</sup> This evidence supports  
15 my view that Mr. King's ROE recommendation would not allow NSPM to  
16 compete for equity capital with other comparable risk electric utility  
17 companies. Authorized ROEs are a widely available and readily understood  
18 benchmark that investors use to compare utility investment alternatives. If  
19 the Commission were to accept Mr. King's ROE recommendation of 9.00  
20 percent, both large and small utility investors would recognize that NSP's  
21 ROE in North Dakota was below almost all other states and would have  
22 strong incentives to make investments in other states with more attractive  
23 return potential.  
24

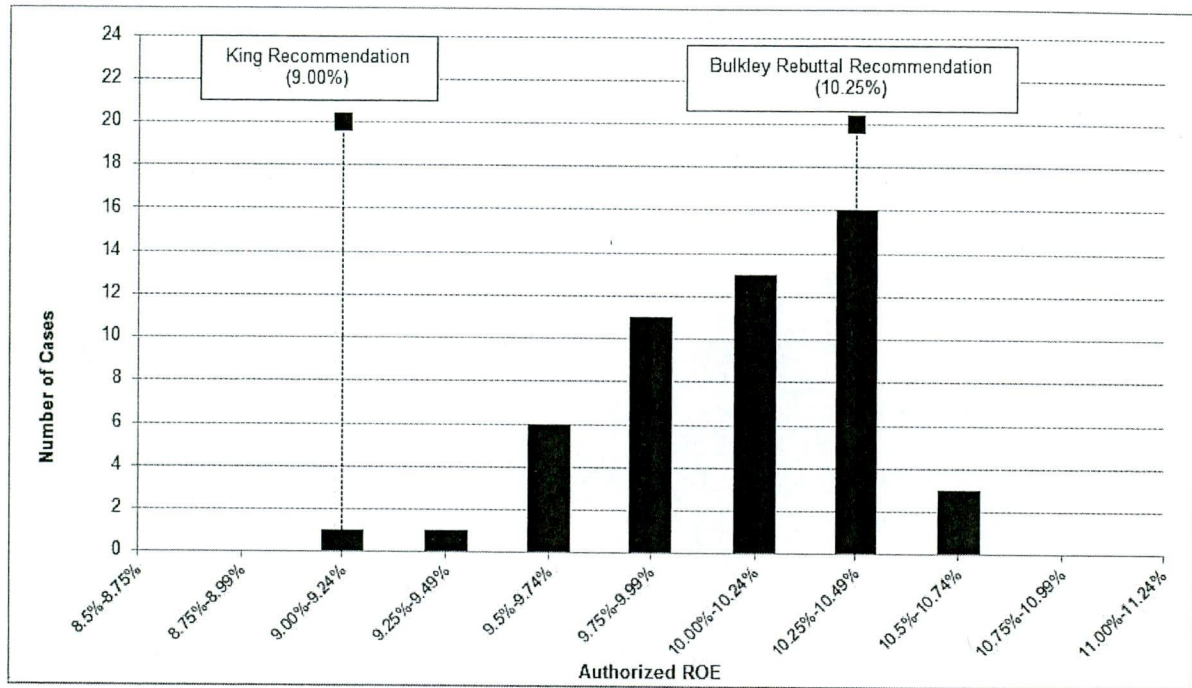
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<sup>7</sup> Direct Testimony of Charles W. King at 15.

<sup>8</sup> The only integrated electric utility that was authorized a 9.00 percent ROE was Maui Electric Company. This decision arose from a Commission modification to a proposed settlement.

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Chart 1  
Authorized ROEs for Integrated Electric Utilities<sup>9</sup>  
January 2012 through July 2013  
Average ROE: 10.04%



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7 Q. DO YOU AGREE WITH MR. KING'S OPINIONS REGARDING DECISIONS BY  
8 OTHER STATE COMMISSIONS?

9 A. No, I do not. Mr. King claims that ROEs authorized by state commissions  
10 "have been artificially higher than necessary" and that "eliminating the glass  
11 floor of ten percent would provide a boost to the economy."<sup>10</sup> Mr. King's  
12 position dismisses the collective decisions of many utility regulators across  
13 the country and ignores the inverse relationship between interest rates and  
14 the equity risk premium. In addition, Mr. King's recommendation also

<sup>9</sup> While the analysis of authorized ROEs presented in Mr. King's Direct Testimony was not limited to integrated electric utilities, Mr. King and I agree that it is important to include only those companies that are integrated electric utilities in the proxy group. See Direct Testimony of Charles W. King at 15.  
<sup>10</sup> Direct Testimony of Charles W. King, at 10.

1 suggests that investors would be willing to accept a return from the  
2 Company's North Dakota operations that is more than 100 basis points less  
3 than the average authorized ROE for other integrated electric utilities in  
4 other states. There is no support for this position. Further, as I will discuss  
5 later in my Rebuttal Testimony, adoption of Mr. King's ROE  
6 recommendation could be detrimental for North Dakota rate payers over  
7 the longer term.

8  
9 Q. DOES AN EXTREMELY LOW AUTHORIZED ROE PROVIDE FINANCIAL  
10 INCENTIVES TO A UTILITY TO FILE ANOTHER RATE CASE?

11 A. Yes. Investors expect utility management to take appropriate actions to  
12 obtain a reasonable return. Accordingly, an extremely low authorized ROE  
13 could provide a strong incentive to promptly reapply for a rate increase and  
14 a reasonable return. The incentive to re-file is made stronger by the  
15 Company's history of low actual earnings in North Dakota, as shown on  
16 Exhibit \_\_\_(AEB-2), Schedule 15, which is based on the Company's annual  
17 reports to the Commission.

18  
19 **III. FACTORS TO BE CONSIDERED IN ESTABLISHING THE**  
20 **ROE**  
21

22 Q. WHAT FACTORS SHOULD BE CONSIDERED IN EVALUATING THE RESULTS OF  
23 ROE MODELS AND ESTABLISHING THE AUTHORIZED ROE?

24 A. The primary factors that should be considered are: (i) the importance of  
25 investors' *actual* return requirements and the critical role of judgment in  
26 selecting the ROE, as compared to mathematical results of models; (ii) the  
27 importance of providing a return that is comparable to returns of other

1 electric utilities with commensurate risk that are available to investors; (iii)  
2 the need for a return that supports a utility's ability to attract needed capital  
3 at reasonable terms, which affects the long run cost of capital and cost of  
4 service; (iv) the importance of a Commission maintaining relative long term  
5 stability of returns rather than reacting to short-term factors; and (v) the  
6 effect of current and expected capital market conditions.

7  
8 Q. HAS THE COMMISSION RECOGNIZED THE IMPORTANCE OF INVESTOR  
9 RETURN REQUIREMENTS AND THE USE OF JUDGMENT IN SETTING THE ROE?

10 A. Yes. The Commission has recognized that selecting the ROE is not a  
11 mathematical exercise and that investors' perspective is the most important  
12 test in selecting the ROE, stating:

13 There is no one percentage that can be termed "fair" nor is  
14 there any mathematical formula available to solve the problem.  
15 There can be many variations of opinion depending largely on  
16 the weight to be given to the different elements considered in  
17 deriving a return... Such an approach [the cost of capital  
18 approach used by the witnesses] is helpful as a guide but is by  
19 no means a precise measure of the return that should be  
20 earned. In the final analysis, the collective judgment of the  
21 investors is the most important and crucial test of whether a  
22 return is adequate. The rate of return is not something that can  
23 be fixed with mathematical precision nor do the rates fixed  
24 assure that a given return will result.<sup>11</sup>

25  
26 The Commission has affirmed the importance of judgment, stating:

27 [A] fair rate of return is a figure reached through the exercise of  
28 judgment rather than a figure resulting from a simple arithmetic  
29 computation.<sup>12</sup>

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<sup>11</sup> 47 PUR 3d, North Dakota Public Service Commission, Re: Montana-Dakota Utilities Company, Case No. 6224, December 14, 1962, at 61. Emphasis added.

<sup>12</sup> 47 PUR 3d, North Dakota Public Service Commission, Re: Otter Tail Power Company, Case No. 6344, July 29, 1963, at 310.

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Q. PLEASE EXPLAIN THE REQUIREMENT THAT THE ROE BE SUFFICIENT TO ENABLE A UTILITY TO RAISE CAPITAL ON REASONABLE TERMS.

A. The ROE needs to be sufficient to allow the Company to attract capital at reasonable rates. This requirement will have a long term effect on the utility's cost of capital and the corresponding cost of service for ratepayers. A decision to reduce a utility's authorized ROE below the level available from other comparable utilities may provide short term rate reductions at the expense of long term cost increases. The Commission has also recognized the importance of this principle in a previous decision, stating: "The return to equity owners should be commensurate with the return on investments on other enterprises having corresponding risks and also sufficient to assure confidence in the financial integrity of the enterprise so as to maintain credit and attract capital."<sup>13</sup> If the Company cannot attract capital, there are negative consequences for ratepayers. While there may be controversy regarding certain of the investments being made by the Company, it is clear that NSPM is in a very substantial construction phase and that the costs of capital incurred for this construction will affect the cost of service for many years. An authorized ROE of 9.00 percent, as proposed by Mr. King, is not sufficient based on current market conditions and the returns on alternative investments of comparable risk.

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<sup>13</sup> *Ibid*, at 60.

1 Q. PLEASE EXPLAIN THE IMPORTANCE OF MAINTAINING RELATIVE STABILITY IN  
2 SETTING ROES.

3 A. It is important to consider how investors would perceive an authorized ROE  
4 of 9.00 percent for NSPM in North Dakota. According to Regulatory  
5 Research Associates, “The North Dakota regulatory climate continues to be  
6 somewhat constructive from an investor viewpoint. Equity return  
7 authorizations are typically in line with, or slightly above, nationwide  
8 averages at the time established by the PSC.”<sup>14</sup> An authorized ROE of 9.00  
9 percent would not be perceived by investors as a supportive regulatory  
10 climate. In turn, such perceptions could make it difficult for NSPM to  
11 attract capital.

12

13 Q. HOW HAS THE COMMISSION HISTORICALLY ESTABLISHED THE ALLOWED  
14 ROE?

15 A. The Commission has historically adjusted the allowed ROE in a measured,  
16 gradual manner in response to changing market conditions, which has  
17 helped to persuade equity investors that utilities in North Dakota can expect  
18 to receive compensatory returns, and that any adjustments will be gradual.  
19 As shown on Chart 2 below, the authorized ROE for the three major electric  
20 utilities in North Dakota has fallen gradually since 2000 as interest rates have  
21 declined. However, the change in ROE has been much more gradual than  
22 Mr. King’s proposal to reduce the Company’s ROE by 140 basis points  
23 (from 10.40 percent to 9.00 percent) over an eighteen-month period.

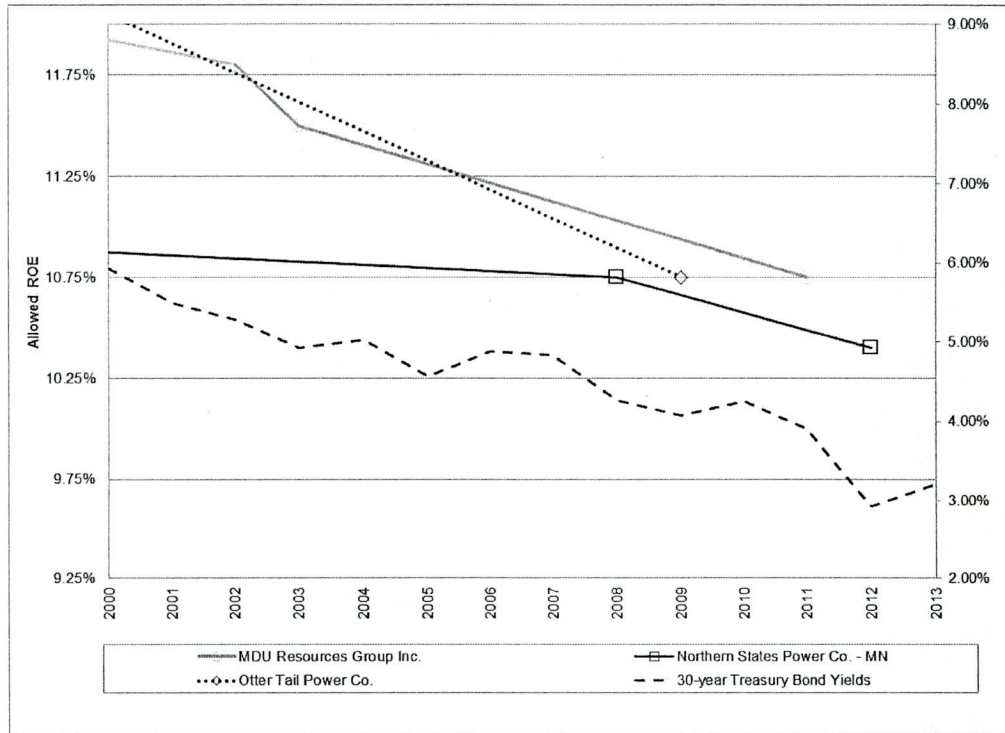
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<sup>14</sup> SNL Financial, North Dakota Commission Profile, accessed July 29, 2013.

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## CHART 2 AUTHORIZED ROEs FOR ELECTRIC UTILITIES IN NORTH DAKOTA - 1990-PRESENT



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Adoption of Mr. King's ROE recommendation of 9.00 percent could cause investors to question the stability and certainty of the regulatory climate in North Dakota, and ultimately could lead to higher capital costs (both debt and equity) for ratepayers. For this reason, it would be reasonable for the Commission to continue to pursue a policy of gradualism with respect to ROE awards, especially when, as discussed in the next section, interest rates are projected to rise over the next few years.

Q. PLEASE SUMMARIZE MR. KING'S POSITION ON CAPITAL MARKET CONDITIONS AND THE IMPLICATION FOR THE COST OF EQUITY.

A. Mr. King provides an overview of current economic and capital market conditions. In particular, Mr. King observes that interest rates on

1 government and corporate bonds are near historic lows,<sup>15</sup> although he does  
2 acknowledge that yields have been “inching up” on government bonds and  
3 utility bonds in the last several weeks due to uncertainty over when the Fed  
4 will reverse the policy of quantitative easing.<sup>16</sup> According to Mr. King, “the  
5 principal implication is that the desirability of utility stocks relative to other  
6 forms of investment has increased with the decline in interest rates.”<sup>17</sup>

7  
8 Q. DO YOU AGREE WITH MR. KING’S ASSESSMENT?

9 A. No, I do not. While Mr. King is correct that interest rates on government  
10 bonds have been near historically low levels, I disagree with his conclusion  
11 that low interest rates imply a correspondingly low Cost of Equity for  
12 electric utilities such as NSPM. Further, Mr. King focuses on the *current* level  
13 of interest rates rather than the markets’ *expectation* that interest rates on both  
14 government and corporate bonds are projected to increase substantially over  
15 the next five years. Since the process of estimating the Cost of Equity is a  
16 forward-looking exercise, it is not appropriate to base that estimate entirely  
17 on the current level of interest rates and economic conditions, especially  
18 when those interest rates are expected to be significantly higher in the next  
19 several years.

20  
21 Mr. King is correct that interest rates have been steadily declining for the  
22 past three decades. However, that period of declining interest rates cannot  
23 continue forever. In fact, many economists are predicting that markets are  
24 at or near a turning point, and that interest rates will increase by several

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<sup>15</sup> Direct Testimony of Charles W. King, at 3-5.

<sup>16</sup> Direct Testimony of Charles W. King, at 30.

<sup>17</sup> *Ibid*, at 8.

1 percentage points from current levels as the Federal Reserve begins to  
2 consider tapering the extraordinary monetary stimulus and as the domestic  
3 economy continues to recover from the last recession.<sup>18</sup> This change in  
4 Federal Reserve policy would represent a significant risk for dividend paying  
5 stocks such as electric and gas utilities, as interest rates on government and  
6 corporate bonds become more competitive with dividend yields.

7  
8 Q. IS THERE EVIDENCE THAT LONG-TERM INTEREST RATES ARE EXPECTED TO  
9 INCREASE?

10 A. Yes. The 30-day average yield on the 30-year U.S. Treasury bond as of July  
11 12, 2013 was 3.46 percent. By contrast, the Blue Chip Financial Forecast  
12 consensus estimate projects that the average yield on the 30-year U.S.  
13 Treasury bond will increase to 5.20 percent for the period from 2015  
14 through 2019.<sup>19</sup> Thus, the consensus estimate from leading economists is an  
15 increase of 174 basis points in U.S. Treasury bond yields over the next  
16 several years.

17  
18 Investment advisors and financial industry regulators have recently warned  
19 investors about the risks associated with rising interest rates. For example,  
20 the Financial Industry Regulatory Association recently issued the following  
21 statement:

22 Currently, interest rates are hovering near historic lows. Many  
23 economists believe that interest rates are not likely to get much  
24 lower and will eventually rise. If that is true, then outstanding  
25 bonds, particularly those with low interest rates and high  
26 duration may experience significant price drops as interest rates

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<sup>18</sup> Wall Street Journal, "Fed's Lockhart Says Reduction in Bond Buys Could Come in September", August 6, 2013. Wall Street Journal, "IMF Urges More Clarity from Fed", July 26, 2013.

<sup>19</sup> Blue Chip Financial Forecasts, Vol. 32, No. 6, June 1, 2013, at 14.

1 rise along the way. If you have money in a bond fund that hold  
2 primarily long-term bonds, expect the value of that fund to  
3 decline, perhaps significantly, when interest rates rise.<sup>20</sup>  
4

5 Q. HAS THE FEDERAL OPEN MARKET COMMITTEE PROVIDED ANY GUIDANCE  
6 ON FORWARD LOOKING INTEREST RATES?

7 A. Yes. In May 2013, the Federal Open Market Committee (FOMC) report  
8 summarized member views on monetary policy. Certain members expressed  
9 views that continuing to communicate the intention to keep the Federal  
10 Funds rate at an extremely low level could result in macroeconomic and  
11 financial imbalances, suggesting that the FOMC might start to taper its  
12 purchases of long-term Treasury bonds. Mr. Bernanke, the Chairman of the  
13 Board of Governors of the Federal Reserve System noted that “a long  
14 period of low interest rates has costs and risks” including “the possibility  
15 that very low interest rates, if maintained too long, could undermine financial  
16 stability.” Furthermore, Mr. Bernanke noted that the FOMC “actively seeks  
17 economic conditions consistent with sustainably higher interest rates.”<sup>21</sup>  
18

19 Q. HOW DID FINANCIAL MARKETS REACT TO THE FOMC MAY 2013 POLICY  
20 STATEMENT?

21 A. The financial market response was quite dramatic, especially in government  
22 and corporate bond markets and among dividend paying stocks such as  
23 electric utilities. Chart 3 below compares the yield on the 30-year Treasury  
24 to the performance of the S&P 500 index and the S&P Utility index in 2013.

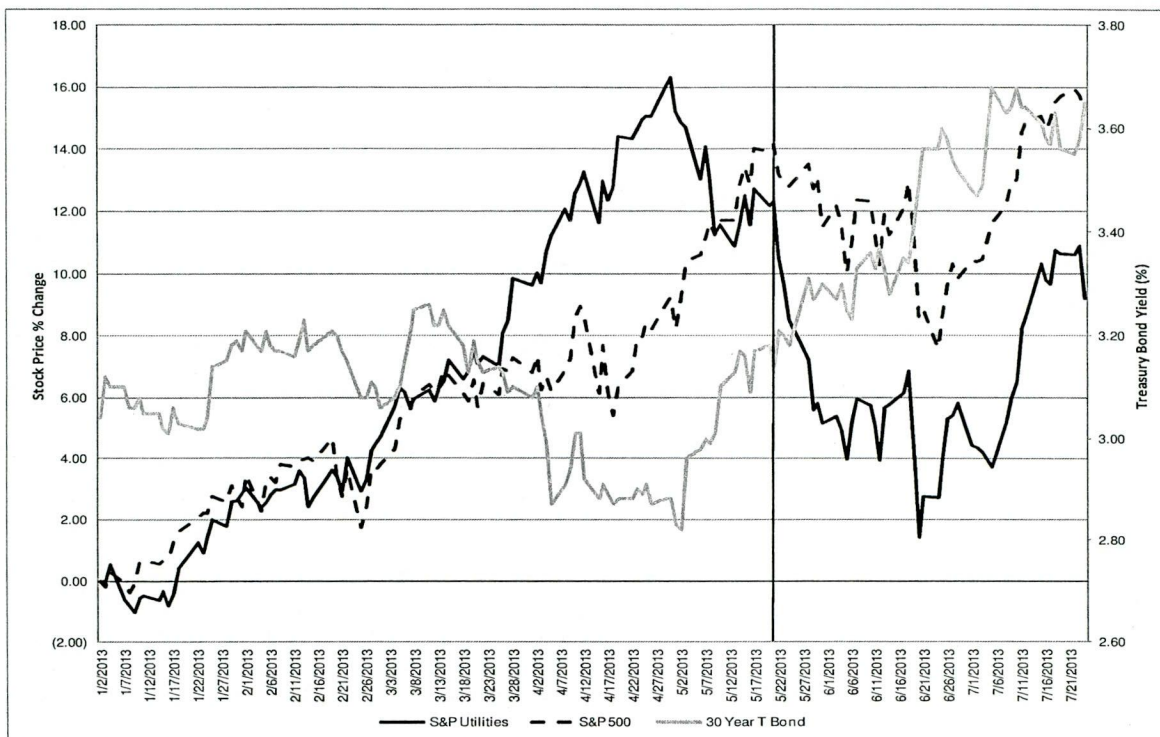
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<sup>20</sup> Financial Industry Regulatory Association, “Duration – What an Interest Rate Hike Could Do to Your Bond Portfolio,” February 14, 2013.

<sup>21</sup> Statement by Ben S. Bernanke, Chairman Board of Governors of the Federal Reserve System before the Joint Economic Committee of the U.S. Congress, May 22, 2013. Federal Open Market Committee Meeting Minutes, May 2013.

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Chart 3  
Comparison of Returns for S&P 500 and S&P Utilities Index  
to 30-Year Treasury Yields



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As shown on the chart, the S&P utility index was quite strong until May 2013, when the FOMC policy statement was released. Since that time, interest rates on 30-year Treasury Bonds have increased from approximately 2.80 percent in late April to slightly above 3.60 percent in late July, while the S&P utility index decreased from a 16.30 percent gain for the year through April 30, 2013 to a 1.41 percent gain for the year by June 20, 2013. Since that date, the S&P 500 has recovered to its previous level of late April, but the S&P utility index remains well below the April peak. This demonstrates the effect that rising interest rates have on utility stocks relative to the broader market.

1

2 Q. WHAT EFFECT DO RISING INTEREST RATES HAVE ON THE COST OF EQUITY?

3 A. The potential for rising interest rates would indicate that the calculated Cost  
4 of Equity for the proxy companies using current market data is likely to be  
5 conservative. Consequently, rising interest rates would support selection of  
6 a return toward the upper end of a reasonable range of equity cost rate  
7 estimates.

8

9 Q. HOW DO CURRENT CAPITAL MARKET CONDITIONS COMPARE TO THOSE AT  
10 THE TIME OF NSPM'S LAST RATE CASE DECISION?

11 A. Market conditions today are not significantly different than they were in  
12 February 2012, when the Commission approved NSPM's current ROE of  
13 10.40 percent;

14 • Credit spreads have narrowed approximately 12-20 basis points since  
15 the date of that decision.

16 • The spread between the dividend yield for the proxy group and the 10-  
17 year Treasury bond yield has also narrowed, especially in the past two  
18 months, but continues to be very volatile.

19 • Interest rates are projected to increase, which has a negative effect on  
20 the utility's ability to attract capital.

21 • As shown in Table 2, (below), short-term projected interest rates are  
22 higher today than in February 2012.

23 – 2013-2014 average projected Treasury yield in February 2012 was  
24 3.41 percent as compared with the current average projection of  
25 3.79 percent, an increase of 38 basis points.



1 reasonable opportunity to actually earn their authorized ROE, and they will  
2 need to file more frequent rate cases in order to recover their prudently-  
3 incurred allowable costs in a timely fashion. For that reason, I recommend  
4 an authorized ROE for NSPM that takes into consideration the likelihood  
5 that borrowing costs will increase in the near to intermediate term during  
6 which rates might be in effect. This is not the appropriate time to be  
7 reducing NSPM's allowed ROE below 10.00 percent, as investors are  
8 becoming increasingly concerned with the implications of higher interest  
9 rates.

#### 10 11 **IV. UPDATED ANALYSES** 12

13 Q. HAVE YOU UPDATED YOUR DCF ANALYSES?

14 A. Yes. I have updated the Constant Growth and Multi-Stage DCF analyses  
15 based on data through July 12, 2013. In the Constant Growth DCF analysis  
16 and the first stage of the Multi-Stage DCF analysis, I have continued to use  
17 earnings growth estimates from Zacks, First Call, and Value Line as the  
18 relevant measure of growth and to present results for the most recent 30, 90  
19 and 180-trading days. The updated mean results of my DCF analysis,  
20 including flotation costs of 24 basis points, are shown on Exhibit \_\_ (AEB-  
21 2), Schedules 1-3 and in Table 3 (below).

1  
2

**Table 3**  
**Updated DCF Results**

	<b>Mean (Low Growth)</b>	<b>Mean</b>	<b>Mean (High Growth)</b>
<b>Constant Growth DCF</b>			
30-Day Average	8.47%	9.73%	11.34%
90-Day Average	8.32%	9.58%	11.19%
180-Day Average	8.49%	9.75%	11.36%
<b>Multi-Stage DCF</b>			
	<b>Mean (Low Growth)</b>	<b>Mean</b>	<b>Mean (High Growth)</b>
30-Day Average	9.64%	9.98%	10.52%
90-Day Average	9.50%	9.83%	10.35%
180-Day Average	9.67%	10.02%	10.55%

3

4 Q. HAVE YOU PERFORMED AN UPDATED CAPM ANALYSIS?

5 A. Yes, I have also updated the CAPM analysis to reflect market data as of July  
6 12, 2013. The updated results are shown in Table 4 (below) (*see* also Exhibit  
7 \_\_ (AEB-2), Schedule 4.0.

8  
9

**Table 4**  
**Updated CAPM Results**

	<b>Current 30- Year Treasury (3.46%)</b>	<b>2013-2014 Projected 30-Year Treasury (3.73%)</b>	<b>2015-2019 Projected 30-Year Treasury (5.20%)</b>	<b>Mean Result</b>
Bloomberg Beta	10.56%	10.64%	11.04%	10.74%
Value Line Beta	10.41%	10.49%	10.91%	10.60%

10

11 Q. HAVE YOU UPDATED THE BOND YIELD PLUS RISK PREMIUM ANALYSIS?

12 A. Yes. The updated Bond Yield Plus Risk Premium analysis includes  
13 authorized ROEs as reported by RRA through July 12, 2013 for electric

1 utilities. As shown in Exhibit\_\_ (AEB-2), Schedule 5, my updated risk  
2 premium results range from 10.17 percent to 10.87 percent, with a mean  
3 result of 10.44 percent.  
4

5 Q. WHAT IS YOUR ROE RECOMMENDATION BASED ON THIS UPDATED  
6 ANALYSIS?

7 A. My updated ROE recommendation is 10.25 percent. This ROE  
8 recommendation is well within the range of DCF results and reflects several  
9 factors, including:

- 10 • A 10.25 percent ROE better reflects the similarities of market  
11 conditions between now and the time of the Company's last rate case,  
12 in which the Company received a 10.40 percent ROE.
- 13 • A 10.25 percent ROE is within the range of the ROE decisions of  
14 other state commissions and will support the financial integrity of  
15 NSPM and enable the Company to attract capital at reasonable rates.
- 16 • A 10.25 percent ROE will facilitate rate stability and could avoid  
17 providing strong financial incentives for the Company to quickly re-file  
18 a request to increase rates.

19  
20 **V. RESPONSE TO MR. KING'S ANALYTICAL METHODOLOGY**  
21

22 Q. PLEASE SUMMARIZE MR. KING'S ANALYSES AND RECOMMENDATION.

23 A. Mr. King recommends an ROE for NSPM of 9.00 percent based on his  
24 proxy group of 16 electric utilities which he considers risk comparable to  
25 NSPM. Mr. King does not offer a range of results based on his various  
26 analyses. Rather, Mr. King offers a single point recommendation based on

1 his weighting of the results of five ROE estimates, including: (1) the  
2 Constant Growth DCF model, (2) the Three-Stage DCF model, (3) the  
3 Sustainable Growth DCF model, (4) the Capital Asset Pricing Model, and (5)  
4 recent ROE awards in other jurisdictions. Mr. King indicates that, in his  
5 view, the Constant Growth DCF model using earnings growth rates  
6 provides the most reliable ROE estimate,<sup>26</sup> and he offers numerous reasons  
7 why the other models are not as reliable for purposes of estimating the Cost  
8 of Equity for NSPM.<sup>27</sup> Despite his concerns about many of the estimation  
9 models, Mr. King arrives at his ROE recommendation by assigning specific  
10 weight to the results of each of the five ROE estimation approaches that are  
11 developed in his testimony.

12  
13 Q. PLEASE SUMMARIZE YOUR PRIMARY CONCERNS WITH MR. KING'S ANALYSES.

14 A. In several instances, Mr. King's testimony and analyses contain significant  
15 internal inconsistencies and are different than the position he has taken in  
16 other recent cases. In addition, I disagree with certain of the methodologies  
17 that Mr. King relies on in developing his ROE recommendation. The  
18 following summarize those areas of disagreement.

- 19 • I do not believe that it is appropriate to assign any weight to Mr. King's  
20 "Three-Stage" DCF model.
  - 21 – Mr. King's Three-Stage DCF does not actually consider growth in  
22 three separate stages and does not consider the time value of  
23 money, as is typical of this form of the DCF model where growth  
24 rates differ over periods of years. By averaging the three "stages"  
25 of growth and adding that to the dividend yield, Mr. King's Three-

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<sup>26</sup> Direct Testimony of Charles W. King, at 19.

<sup>27</sup> Direct Testimony of Charles W. King, at 23 and 27.

- 1                   Stage DCF model is simply another form of the Constant Growth  
2                   DCF model.
- 3                   • Similar to the Multi-Stage DCF model, I do not believe that the results  
4                   of Mr. King's Sustainable Growth DCF model should be afforded any  
5                   weight in the final ROE recommendation for three reasons.
- 6                   – First, Mr. King's sustainable growth model relies on a fundamental  
7                   assumption that low retention ratios are associated with low future  
8                   earnings growth rates. Academic studies performed in 2003  
9                   demonstrate the opposite is true; that is, future earnings growth is  
10                  associated with high dividend payout ratios.
- 11                  – Second, while Mr. King's sustainable growth DCF model relies on  
12                  data from Value Line, the results of that model are 182 basis  
13                  points lower than the Value Line average projected ROE for Mr.  
14                  King's proxy group.
- 15                  – Third, in his Direct Testimony, Mr. King enumerates several  
16                  concerns with the sustainable growth model. In fact, in a recent  
17                  case before the New York Public Service Commission, a  
18                  jurisdiction that primarily relies on the sustainable growth model,  
19                  Mr. King did not include this model in his analysis.
- 20                  • Mr. King's analyses are inconsistent with his criticisms of the analyses  
21                  contained in my Direct Testimony.
- 22                  – Mr. King's sustainable growth DCF analysis uses projected figures  
23                  from Value Line for the 2016-18 period, even though he criticizes  
24                  my CAPM analysis for using forecasted interest rates over that  
25                  same time period.

1           – Mr. King dismisses my Bond Yield plus Risk Premium analysis as  
2           circular, but he gave weight to a very similar analysis in a Maryland  
3           case involving Baltimore Gas and Electric in testimony filed in  
4           October 2012.

5           – In his analysis of recent returns in other jurisdictions, Mr. King  
6           includes transmission and distribution companies, even though he  
7           excludes those same companies when he is selecting his proxy  
8           group for NSPM.

- 9           • Finally, Mr. King’s flotation cost adjustment does not recognize that  
10          flotation costs are a permanent adjustment to the equity capital of the  
11          company and therefore need to be considered permanently.

12  
13 Q.   HOW HAVE YOU ADDRESSED THOSE INCONSISTENCIES?

14 A.   I recommend that Mr. King’s “Multi-Stage” DCF and sustainable growth  
15   DCF results be given no weight in the determination of the ROE in this  
16   case. As shown on Table 8 (below), (*see also* Exhibit\_\_\_(AEB-2), Schedule 6)  
17   I have applied Mr. King’s relative weights to the remaining models and  
18   included the results of the Bond Yield plus Risk Premium analysis, which  
19   produces an ROE estimate of 9.97 percent.

20  
21   **A. Proxy Group Selection**

22 Q.   PLEASE DESCRIBE THE SCREENING CRITERIA THAT MR. KING USED TO  
23   SELECT HIS PROXY GROUP.

24 A.   Mr. King used four screening criteria to develop his proxy group: (1) the  
25   percentage of revenues derived from electric utility operations; (2) the  
26   percentage of revenues from non-regulated operations; (3) S&P credit  
27   ratings within two notches of NSP’s current rating of A-; and (4) utilities that

1 are vertically integrated (*i.e.*, they own generation assets).<sup>28</sup> Based on these  
2 screens, Mr. King selects a group of 16 electric utilities which he asserts are  
3 comparable in business and financial risk to NSPM.<sup>29</sup>  
4

5 Q. IS IT IMPORTANT TO SELECT A PROXY GROUP THAT IS SIMILAR IN OVERALL  
6 FINANCIAL AND BUSINESS RISK TO THE SUBJECT COMPANY?

7 A. Yes. Selecting a proxy group that is comparable to the subject company is  
8 essential to meeting the criteria of comparability of earnings, as the United  
9 States Court of Appeals for the District of Columbia (the “Court of  
10 Appeals”) has explained:

11 That proxy group arrangements must be risk-appropriate is the  
12 common theme in each argument. The principle is well-  
13 established. *See Hope Natural Gas Co.*, 320 U.S. at 603 (“[T]he  
14 return to the equity owner should be commensurate with  
15 returns on investments in other enterprises having  
16 corresponding risks.”); ... The principle captures what proxy  
17 groups do, namely, provide market-determined stock and  
18 dividend figures from public companies comparable to a target  
19 company for which those figures are unavailable.<sup>30</sup>  
20

21 Q. HOW DOES YOUR PROXY GROUP DIFFER FROM MR. KING’S?

22 A. As shown in Table 5 (below), eleven of the 17 companies in Mr. King’s  
23 proxy group are included in my proxy group. The reason each company in  
24 Mr. King’s proxy group was excluded from my proxy group is provided in  
25 the far right column.

---

<sup>28</sup> Direct Testimony of Charles W. King, at 14-15.

<sup>29</sup> On Exhibit CWK-2, Schedule 1, Mr. King excludes American Electric Power from his proxy group because he indicates the company does not pass his credit rating screen. However, AEP has an S&P rating of BBB, not B as reported by Mr. King. Therefore, AEP passes Mr. King’s screen and should be included in his proxy group. Further, on that same exhibit, Mr. King indicates that TECO Energy is included in his proxy group. However, TECO does not pass his revenue screen. It does not appear that Mr. King included TECO in his analysis on the subsequent exhibits.

<sup>30</sup> *Petal Gas Storage v. FERC*, 496 F.3d 695, 699 (D.C. Cir. 2007).

1  
2

**TABLE 5**  
**COMPARISON OF BULKLEY AND KING PROXY GROUPS**

	Ticker	Bulkley Proxy Group	King Proxy Group	Reason Excluded from Bulkley Proxy Group <sup>31</sup>
ALLETE	ALE	<input type="checkbox"/>	<input type="checkbox"/>	
Alliant Energy Corp.	LNT		<input type="checkbox"/>	(1)
American Electric Power	AEP	<input type="checkbox"/>	<input type="checkbox"/>	
Cleco Corp.	CNL	<input type="checkbox"/>	<input type="checkbox"/>	
Duke Energy	DUK		<input type="checkbox"/>	(2)
El Paso Electric	EE		<input type="checkbox"/>	(3)
Empire District Electric	EDE	<input type="checkbox"/>	<input type="checkbox"/>	
First Energy Corp.	FE	<input type="checkbox"/>		
Great Plains Energy	GXP	<input type="checkbox"/>	<input type="checkbox"/>	
Hawaiian Electric	HE	<input type="checkbox"/>		
IDACORP	IDA	<input type="checkbox"/>	<input type="checkbox"/>	
Northwestern Corp.	NWE		<input type="checkbox"/>	(1)
Otter Tail Power	OTTR	<input type="checkbox"/>		
PG&E Corp.	PCG		<input type="checkbox"/>	(1)
Pinnacle West Capital	PNW	<input type="checkbox"/>	<input type="checkbox"/>	
Portland General	POR	<input type="checkbox"/>	<input type="checkbox"/>	
Southern Company	SO	<input type="checkbox"/>	<input type="checkbox"/>	
Westar Energy	WR	<input type="checkbox"/>	<input type="checkbox"/>	
Wisconsin Energy	WEC	<input type="checkbox"/>	<input type="checkbox"/>	
Xcel Energy Corp.	XEL		<input type="checkbox"/>	(4)

3

4 Q. DO YOU AGREE WITH MR. KING'S SCREEN BASED ON THE PERCENTAGE OF  
5 REVENUE FROM ELECTRIC UTILITY OPERATIONS?

6 A. No, I do not. While I agree with Mr. King that it is important to select  
7 companies that are primarily engaged in electric utility operations, I disagree  
8 with his screen based on the percentage of revenues from electric utility

<sup>31</sup> Reasons: (1) – Percent operating income derived from regulated electric operations; (2) – involved in merger or significant transaction; (3) – history of consistent quarterly cash dividends; (4) – parent company of NSPM.

1 operations. As Mr. King recognizes in his testimony, utility investors are  
2 interested in *income* from dividends. Dividends are a function of *earnings, not*  
3 *revenues*. As such, it is more appropriate to screen potential proxy companies  
4 based on operating income rather than revenue because operating income is  
5 more closely related to earnings, which are then used to support dividend  
6 payments. For that reason, I have selected my proxy group based on the  
7 percentage of operating income that each company derived from regulated  
8 electric operations over the past three years.

9  
10 Q. WHAT IS YOUR RESPONSE TO MR. KING'S CONCERN WITH THE INCLUSION OF  
11 OTTER TAIL CORPORATION IN YOUR PROXY GROUP?

12 A. Mr. King excludes Otter Tail Corporation from his proxy group because it  
13 does not pass his screening criteria for percent of revenue derived from  
14 electric operations and credit rating.<sup>32</sup> Mr. King cites Otter Tail as an  
15 example of why his revenue screen is more appropriate than my operating  
16 income screen.<sup>33</sup> I disagree with Mr. King with respect to the inclusion of  
17 Otter Tail Corp. in the proxy group for NSPM for several reasons.  
18 According to the most recent Value Line report for Otter Tail, which Mr.  
19 King also relies on:

20 The company has made several important divestitures in recent  
21 years, which has allowed it to reduce its risk profile and  
22 increase focus on the Electric business. This line ought to  
23 benefit from a substantial increase in its regulated rate base and  
24 should deliver more predictable growth. Otter Tail plans to

---

<sup>32</sup> Mr. King excludes companies that are not within two bond ratings of the A- rating that S&P has assigned to NSP. My screening criteria exclude companies that do not have an investment grade rating by S&P or Moody's.

<sup>33</sup> Direct Testimony of Charles W. King, at 31-32.

1 invest in generation and transmission projects for this business  
2 that should boost earnings and returns on capital.<sup>34</sup>  
3

4 This is consistent with Otter Tail's recent investor presentation in which the  
5 company indicated that its focus is on expanding the regulated electric utility  
6 business. Otter Tail projects compound annual growth in electric utility rate  
7 base of 10.5 percent from 2013-2017<sup>35</sup> and targets approximately 75 percent  
8 of earnings from electric utility operations.<sup>36</sup> Based on this information, it is  
9 clear that Otter Tail's future earnings growth will be driven by electric utility  
10 operations. As such, I have continued to include Otter Tail in my proxy  
11 group for NSPM.  
12

13 Q. WHAT IS YOUR CONCLUSION WITH RESPECT TO THE APPROPRIATE PROXY  
14 GROUP FOR NSPM IN THIS PROCEEDING?

15 A. For the reasons explained in my Rebuttal Testimony, my proxy group of  
16 thirteen electric utilities is risk comparable to NSPM and therefore I have  
17 made no adjustments to my proxy group based on Mr. King's suggestions.  
18

#### 19 **B. Calculation of Dividend Yield in Constant Growth DCF Model**

20 Q. PLEASE EXPLAIN MR. KING'S CALCULATION OF THE DIVIDEND YIELD AND  
21 HOW THAT COMPARES TO THE METHOD USED IN YOUR TESTIMONY.

22 A. Mr. King calculates the dividend yield based on projected dividends from  
23 Value Line for each company in his proxy group for the last two quarters of  
24 2013 and the first two quarters of 2014. By comparison, my approach  
25 adjusts the most recent annual dividend for future expected growth. Since

---

<sup>34</sup> Value Line, Otter Tail Corporation, June 21, 2013.

<sup>35</sup> Otter Tail Corporation, Presentation to Edison Electric Institute Course on Strategy, May 2013, Slide 7.

<sup>36</sup> *Ibid*, Slide 3.

1 dividends are changed at different times throughout the year, the calculation  
2 is made by multiplying the most recent annual dividend by 0.5X the growth  
3 rate for each company in my proxy group.  
4

5 Q. WHY DO YOU DISAGREE WITH MR. KING'S APPROACH?

6 A. The Constant Growth DCF model assumes that earnings, dividends, and  
7 book value per share all grow at the same constant rate and that the dividend  
8 payout ratio remains constant. Mr. King's dividend yield calculation violates  
9 these assumptions by including dividend payments that are the same in the  
10 future period as in the current period even though earnings are expected to  
11 increase. Holding the dividend payments constant effectively assumes,  
12 contrary to the fundamental assumptions of the Constant Growth DCF  
13 model, that the dividend payout ratio will change.  
14

15 Q. PLEASE DISCUSS MR. KING'S EXAMPLE OF THE EMPIRE DISTRICT ELECTRIC  
16 DIVIDEND GROWTH ASSUMPTIONS.

17 A. As support for his approach, Mr. King cites the Empire District Electric  
18 ("EDE") dividend assumption. Value Line projects the EDE dividend as  
19 \$1.00 in both 2013 and 2014. Mr. King notes that EDE had not made any  
20 changes to its dividend payment for several periods prior to its dividend cut  
21 in 2011. Therefore, Mr. King concludes that it is not reasonable to assume  
22 an increasing dividend.  
23

24 Q. DO YOU AGREE WITH THIS CONCLUSION?

25 A. No, I do not. In addition to being inconsistent with the DCF model, the  
26 underlying facts do not support his conclusion. EDE suspended its  
27 dividend payment for two quarters in 2011 after the tornado in Joplin,

1 Missouri, stating that it would resume the dividend in 2012 at a lower rate.  
2 EDE did, in fact, reinstate the dividend at the lower \$1.00 level in 2012.  
3 Under my approach, EDE's dividend payment is expected to grow by 4.0  
4 percent from \$1.00 to \$1.04 per share. This seems reasonable considering  
5 that the previous dividend had been \$1.28 per share and that the reinstated  
6 lower dividend related to an explainable event. As such, I do not share Mr.  
7 King's opinion that the EDE dividend history supports his position.  
8

9 Q. DO YOU HAVE OTHER SPECIFIC CONCERNS WITH MR. KING'S CALCULATION  
10 OF THE DIVIDEND YIELD FOR HIS PROXY COMPANIES?

11 A. Yes, I do. Mr. King's dividend yield calculation for Pinnacle West Capital  
12 ("PNW") is incorrect because the dividend used by Mr. King is not a regular  
13 annual dividend for PNW. The PNW dividend for 2013 as reported by  
14 Value Line was \$1.66 per share.<sup>37</sup> However, as Value Line explains, this  
15 amount includes only three dividend payments because PNW moved the  
16 January 2013 dividend payment to December 2012 in an effort to avoid  
17 possible higher tax rates on dividends.<sup>38</sup> The actual quarterly dividend for  
18 PNW in the third quarter of 2013 is \$0.55 per share, which Value Line  
19 projects will increase to \$0.57 in the fourth quarter of 2013 and the first two  
20 quarters of 2014. Therefore, the dividend yield for PNW using Mr. King's  
21 method would be 3.88 percent rather than the 3.41 percent that he has  
22 calculated. As shown in Exhibit\_\_\_ (AEB-2), Schedule 7, correcting the  
23 dividend yield calculation for PNW increases the average of Mr. King's  
24 Constant Growth DCF results from 9.11 percent to 9.21 percent.

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<sup>37</sup> Value Line, Pinnacle West Capital Corporation, May 3, 2013.

<sup>38</sup> *Ibid.*

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2

**C. Application of Multi-Stage DCF model**

3

Q. PLEASE DISCUSS THE RESULTS OF MR. KING'S MULTI-STAGE (OR THREE-STAGE) DCF MODEL.

4

5

A. Mr. King's Multi-Stage DCF analysis produces an ROE estimate of 8.43 percent.<sup>39</sup> Mr. King does not present his Multi-Stage DCF results for each individual company in his proxy group, so it is not possible to determine from his exhibit if any of the individual company results should be excluded as being below the 7.23 percent floor that he establishes for his Constant Growth DCF results.

6

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12

Q. PLEASE SUMMARIZE THE MULTI-STAGE MODEL AND MR. KING'S APPLICATION OF THAT MODEL.

13

14

A. The Multi-Stage DCF is designed to allow for different growth rate assumptions in the near term, intermediate term and long term. As discussed in my Direct Testimony, the Multi-Stage DCF model utilizes different growth rates in different time periods, and discounts those growth rates back to the net present value at the current period.<sup>40</sup> Discounting the growth rates recognizes the time value of money of different growth rates during different time periods. Mr. King states that he relies on Value Line dividend growth rates in the first stage (years 1-5), average earnings per share growth rates in the second stage (years 6-10), and GDP growth rate projections from the Congressional Budget Office and Social Security Administration in the third stage (year 11 and beyond).<sup>41</sup>

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<sup>39</sup> See Exhibit CWK-2, Schedule 3.

<sup>40</sup> Direct Testimony of Ann E. Bulkley, at 18-19.

<sup>41</sup> Direct Testimony of Charles W. King, at 20.

1  
2 Although Mr. King's testimony suggests that he has utilized different growth  
3 rates in different time periods (or stages),<sup>42</sup> this does not appear to be the  
4 case. As shown on Exhibit CWK-2, Schedule 3, Mr. King derives his  
5 growth rate by simply averaging the growth rates for his three "stages".  
6 That is, the growth rate in Mr. King's Multi-Stage DCF model is a simple  
7 average of (1) dividend growth rates from Value Line, (2) the average of  
8 analyst earnings growth rates and long-term GDP growth rates, and (3) long-  
9 term GDP growth rates. Mr. King then adds the dividend yield to the  
10 average growth rate to arrive at his Multi-Stage DCF result. By applying a  
11 simple average of the three growth rates discussed above, Mr. King's Three-  
12 Stage DCF model fails to reflect the time value of money, which is  
13 inconsistent with the theory that the return that is estimated using the Multi-  
14 Stage DCF model reflects changes in rates of growth over time. Mr. King's  
15 Three-Stage DCF model is actually a Constant Growth DCF model that uses  
16 the average of three different sources of growth rates rather than relying on  
17 one estimate of growth. As such, Mr. King's model is not properly  
18 characterized as a Multi-Stage or Three-Stage DCF model and should be  
19 given no weight in the selection of the ROE.

20  
21 By contrast, my Multi-Stage DCF model utilizes different growth rates in the  
22 three different stages, including long-term GDP growth in the third stage  
23 (which covers years 11-200 in my multi-stage model), as explained in my  
24 Direct Testimony.<sup>43</sup>

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<sup>42</sup> Direct Testimony of Charles W. King, at 20.  
<sup>43</sup> Direct Testimony of Ann E. Bulkley, at 18-19.

1 Q. DO YOU DISAGREE WITH OTHER ASPECTS OF MR. KING'S MULTI-STAGE DCF  
2 ANALYSIS?

3 A. Yes, I disagree with four other aspects of his analysis. First, as discussed  
4 previously in my Rebuttal Testimony, Mr. King's dividend yield calculation  
5 for PNW is incorrect because the dividend used by Mr. King is not a regular  
6 annual dividend for PNW. Correcting that calculation increases the average  
7 dividend yield for Mr. King's proxy group to 3.85 percent.

8

9 My second area of disagreement is with the Value Line dividend growth rate  
10 that Mr. King relies on in the first stage of his analysis. Throughout his  
11 testimony, Mr. King correctly states that earnings growth rates are the most  
12 important indicator of growth for investors.<sup>44</sup> His Constant Growth DCF  
13 model relies exclusively on earnings growth rates from Value Line, First Call,  
14 and Zacks. Thus, it is not clear why Mr. King chose to use dividend growth  
15 rates from Value Line in the first stage of his Multi-Stage DCF model. By  
16 contrast, I have used earnings growth rates in the first stage of my Multi-  
17 Stage DCF model. As discussed in my Direct Testimony, earnings are the  
18 fundamental determinant of a company's ability to pay dividends.  
19 Furthermore, academic research has shown that stock prices are more  
20 closely tied to earnings growth than to dividend or book value growth.<sup>45</sup>

21

22 My third area of disagreement with Mr. King's application of the Multi-Stage  
23 DCF model is that he uses earnings growth rates in the second stage. While  
24 I agree that earnings are a reliable indicator of investors' growth  
25 expectations, I note that analyst earnings growth rates typically project five

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<sup>44</sup> Direct Testimony of Charles W. King, at 17.

<sup>45</sup> Direct Testimony of Ann E. Bulkley, at 17-18.

1 years of growth from the date of the estimate. Therefore, it is not  
2 appropriate to use five-year projected earnings growth rates in the second  
3 stage of the Multi-Stage DCF, which projects growth in years six through  
4 ten. In my Multi-Stage DCF model, the second stage allows for a transition  
5 from the short-term growth rate to the long-term growth rate.

6  
7 My final area of disagreement with Mr. King's Multi-Stage DCF analysis  
8 relates to the reasonableness of his long-term growth rate of 4.43 percent,  
9 which is based on projected nominal GDP growth rates from the  
10 Congressional Budget Office ("CBO") and the Social Security  
11 Administration ("SSA"). Specifically, I disagree with the timing of the  
12 growth rates in the Multi-Stage DCF model, I question the appropriateness  
13 of the sources for estimating long-term GDP growth and finally, I disagree  
14 with the overall reasonableness of the resulting 4.43 percent estimate of  
15 long-term growth.

16  
17 Q. IS IT APPROPRIATE TO RELY ON THE CBO'S PROJECTION OF THE LONG-TERM  
18 GROWTH RATE AS MR. KING HAS APPLIED IT?

19 A. No. Mr. King states that his DCF model has three stages and that the long-  
20 term growth rate would apply to the last stage of the model, beyond 10 or 15  
21 years".<sup>46</sup> The CBO projection that Mr. King relies on is for the period from  
22 [2019-2023], which does not correspond to the time period for which Mr.  
23 King states that he is applying that growth rate (*i.e.*, years 11 and beyond). In  
24 using that growth rate in the final stage of his model, even though the CBO's  
25 intent was to project growth over a more near term defined period, Mr. King

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<sup>46</sup> Direct Testimony of Charles W. King at 20.

1 is assuming that the long-term nominal GDP growth rate will be almost 200  
2 basis points lower than it has been on average in the U.S. since 1929. Mr.  
3 King offers no support for that assumption. By comparison, my GDP  
4 growth rate of 5.40 percent acknowledges that future inflation is projected to  
5 be approximately 2.10 percent (which is somewhat lower than the historical  
6 inflation rate), while relying on the actual historical growth rate in real GDP  
7 of 3.22 percent from 1929-2012.

8  
9 Q. WHY DO YOU DISAGREE WITH THE USE OF THE PROJECTED GDP GROWTH  
10 RATE PUBLISHED BY THE SSA?

11 A. Mr. King relies on the SSA projection of real GDP growth of 2.10 percent.  
12 Two of my primary concerns with the SSA growth rate are shared by the  
13 American Academy of Actuaries (AAA), (1) what the SSA is predicting in its  
14 growth rate, and (2) the sensitivity of the growth rate to the inputs. First, in  
15 their analysis of the SSA growth rates, the AAA states that the SSA is not  
16 forecasting growth in GDP, but rather is estimating growth in the labor  
17 force and productivity. The AAA states that the SSA trustees “do not  
18 directly make an assumption regarding growth of gross domestic product.”<sup>47</sup>  
19 Rather, “the trustees arrive at their estimate of GDP growth indirectly by  
20 estimating growth in the labor force and growth in productivity.”<sup>48</sup> Second,  
21 AAA notes that the SSA projected long-term GDP growth rate is very  
22 sensitive to slight changes in the underlying assumptions that are used to  
23 estimate the GDP growth rate.

24

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<sup>47</sup> *Ibid*, at 6.

<sup>48</sup> *Ibid*.

1 Q. ARE THERE OTHER REASONS WHY THE SSA GROWTH RATE SHOULD NOT BE  
2 USED TO ESTIMATE LONG-TERM GDP GROWTH?

3 A. Yes. The purpose of the SSA trustees' report is to evaluate the long-term  
4 viability of the social security program. As a result, the SSA has an incentive  
5 to underestimate long term growth.

6

7 The AAA report concludes that "there have always been some observers  
8 who questioned whether the Social Security trustees' assumptions are the  
9 best basis for evaluating the financial condition of Social Security and the  
10 impact of various reform proposals. Certainly, other assumptions may also  
11 be reasonable, and even small changes in assumptions can, over a 75 year  
12 period, lead to large changes in the projections. Any projection over a 75-  
13 year period is subject to a high degree of uncertainty."<sup>49</sup>

14

15 For all of these reasons, my view is that the SSA estimate of long-term GDP  
16 growth is likely understated, and is based on underlying assumptions which  
17 are very sensitive to economic and demographic trends which cannot be  
18 predicted with any degree of certainty over a long time period. Therefore, I  
19 continue to believe that the use of historical real GDP growth, adjusted for  
20 projected inflation, is more appropriate.

21

22 Q. IS THERE FURTHER EVIDENCE THAT MR. KING'S GDP GROWTH RATE IS AT  
23 ODDS WITH THE EQUITY RETURNS THAT INVESTORS REQUIRE?

24 A. Yes. Bank of America Merrill Lynch publishes a monthly report titled  
25 "Quantitative Profiles" that presents the implied and required returns for the

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<sup>49</sup> *Ibid*, at 8.

1 S&P 500 and the various industry sectors (*e.g.*, utilities) on a monthly basis.  
2 As shown on the table below, the implied and required returns for the  
3 utilities sector for the months of February 2013 through April 2013 ranged  
4 from 9.50 percent to 9.70 percent. Subtracting the average yield on utility  
5 bonds over that same period produces an implied growth rate of between  
6 5.50 percent and 5.60 percent.

7  
8 **Table 6**  
9 **Implied Growth Rates for Utilities Sector<sup>50</sup>**

	Utilities Implied Return	Utilities Yield	Implied Growth
February 2013	9.7%	4.2%	5.5%
March 2013	9.6%	4.1%	5.5%
April 2013	9.5%	3.9%	5.6%

10  
11 Q. HAS THERE BEEN A TENDENCY TO UNDER-ESTIMATE GDP GROWTH RATES IN  
12 THE DECADE AFTER SEVERE ECONOMIC EVENTS?

13 A. Yes. The financial crisis and recession that began in 2007 were qualitatively  
14 different from most other U.S. economic downturns, which were followed  
15 by a rapid return to pre-recession overall output growth levels. In that  
16 regard, the current U.S. economic growth situation is similar to that  
17 following the two most severe economic events in U.S. history (*i.e.*, the 1929  
18 stock market crash and the 1973 oil shock). Economists who have  
19 examined the repercussions of those two historical crises (and similar severe

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<sup>50</sup> Source: Bank of America Merrill Lynch, Quantitative Profiles, February 2013, March 2013, April 2013.

1 financial crises in other countries) have found that GDP growth rates tended  
2 to be lower during the decade following such events.

3  
4 Q. HAVE YOU PERFORMED AN ANALYSIS OF GDP GROWTH AFTER A SEVERE  
5 FINANCIAL CRISIS?

6 A. Yes. I compared the average real GDP growth in the first ten years  
7 immediately following the two historical economic crises most comparable  
8 to the recent financial crisis (*i.e.*, the 1929 stock market crash and the 1973  
9 oil shock) to the average real GDP growth in the next two decades following  
10 each crisis (*i.e.*, eleven to 30 years after the events). I did the same for each  
11 of the 20<sup>th</sup>-century U.S. recessions for which sufficient data are available.  
12 My findings are presented in the table below.

13

1  
2

**Table 7**  
**Real GDP Growth Rates Following U.S. Economic Downturns<sup>51</sup>**

Event	Compound Average Real GDP Growth Rate		
	Decade Following Crisis	Next Two Decades	Difference (Basis Points)
Major Economic Crises			
1929 Stock Market Crash	2.06%	4.72%	266
1973 Oil Shock	2.55%	3.39%	83
Other Recessions			
1937	6.68%	4.15%	-253
1945	3.77%	3.59%	-18
1948	3.79%	3.95%	16
1953	3.60%	3.23%	-37
1957	4.84%	3.13%	-170
1960	4.41%	3.28%	-112
1969	3.57%	3.01%	-56
1980	3.32%	2.45%	-88
1981	3.52%	2.62%	-90

3  
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9

Table 7 shows that real GDP growth in the first ten years following the 1929 stock market crash and the 1973 oil shock was substantially lower than real GDP growth in the next two decades following each event. In contrast, eight out of the nine other 20<sup>th</sup>-century U.S. economic downturns analyzed showed the opposite pattern.

10 Q. WHAT DO YOU CONCLUDE REGARDING GDP GROWTH?

11 A. In light of the academic research cited above and the findings presented in  
12 Table 7, it is reasonable to conclude that current projections of real GDP

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<sup>51</sup> Real GDP data are from the U.S. Bureau of Economic Analysis. The years in which each recession started are from the National Bureau of Economic Research (“NBER”), “US Business Cycle Expansions and Contractions,” available at <http://www.nber.org/cycles.html>. Note that this table excludes the three most recent recessions, which started in 1990, 2001, and 2007 owing to a lack of sufficient data for GDP growth in the following years to calculate comparable long-term GDP growth rates.

1 growth are under-stated. The most reasonable means to forecast long-term  
2 GDP growth is to assume a return to long-term historical rates of real GDP  
3 growth and to estimate long-term nominal GDP growth based largely on  
4 market-based, long-term inflation estimates.  
5

6 Q. HAVE YOU RE-CREATED MR. KING'S MULTI-STAGE DCF ANALYSIS FOR THE  
7 INDIVIDUAL COMPANIES IN HIS COMPARABLE GROUP?

8 A. Yes. Exhibit\_\_\_ (AEB-2), Schedule 8 applies Mr. King's "Multi-Stage"  
9 DCF methodology for each of the companies in his proxy group. In  
10 reviewing the results of his Constant Growth DCF analysis, Mr. King  
11 established a floor of 7.23 percent, excluding observations below that return  
12 as being unreasonably low relative to the yield on corporate bonds. As  
13 shown on Exhibit\_\_\_ (AEB-2), Schedule 8, applying that lower boundary to  
14 the results of Mr. King's "Multi-Stage" DCF analysis, El Paso Energy (at  
15 6.82 percent) should have been excluded from the results of Mr. King's  
16 Multi-Stage DCF analysis, which would increase the results of his analysis to  
17 8.55 percent.  
18

19 Q. PLEASE SUMMARIZE YOUR CONCLUSIONS ON MR. KING'S "MULTI-STAGE" DCF  
20 MODEL.

21 A. My primary conclusion is that Mr. King's "Multi-Stage" DCF model has a  
22 number of serious flaws and should not be considered in selecting an ROE  
23 in this proceeding. Specifically, his model does not apply different growth  
24 rates for different time periods. Rather, it applies an average growth rate in  
25 perpetuity. Further, the dividend yield is incorrect and the growth rates used  
26 by Mr. King in the different stages of his analysis are not reasonable, and  
27 tend to understate the Cost of Equity for electric utilities such as NSPM.

1 Based on the methodological issues I have identified with Mr. King's Multi-  
2 Stage DCF analysis, I believe it is appropriate not to afford the results of this  
3 analysis any weight in the determination of the appropriate ROE for NSPM.  
4

5 Q. DOES YOUR MULTI-STAGE DCF MODEL AVOID THESE ERRORS?

6 A. Yes. The short-term and long-term growth rates in my Multi-Stage DCF  
7 analysis are based on reasonable estimates of earnings growth in the short-  
8 term and nominal GDP growth in the long-term. Research has shown that  
9 real GDP growth tends to be slower in the decade following a severe  
10 economic recession, so it is more appropriate to rely on historical real GDP  
11 growth and projected inflation rates to derive the projected nominal GDP  
12 growth rate, as I have done in developing my terminal growth rate.  
13

#### 14 **D. Sustainable Growth DCF Model**

15 Q. PLEASE SUMMARIZE MR. KING'S SUSTAINABLE GROWTH DCF ANALYSIS.

16 A. Mr. King develops what are described as "sustainable" growth rates for each  
17 of his proxy group companies based on projected Value Line data for the  
18 period from 2016-2018. Specifically, Mr. King calculates the sustainable  
19 growth rate by multiplying the retention ratios and returns on book value  
20 (known as  $b \times r$ ) and adding the product of the growth in shares outstanding  
21 and the market/book ratio (known as  $s \times v$ ). Based on Mr. King's analysis,  
22 the sustainable growth rate for his proxy group companies is 4.17 percent.  
23 Excluding the results below 7.23 percent (Mr. King's low threshold), the  
24 results of his sustainable growth DCF model are 8.19 percent (mean) and  
25 7.97 percent (median).

1

2 Q. PLEASE SUMMARIZE YOUR PRIMARY CONCERNS WITH MR. KING'S  
3 SUSTAINABLE GROWTH DCF MODEL.

4 A. I have three primary concerns with Mr. King's sustainable growth model.  
5 First, Mr. King's sustainable growth model relies on a fundamental  
6 assumption that low retention ratios are associated with low future earnings  
7 growth rates. Academic studies performed in 2003 demonstrate the opposite  
8 is true; that is, future earnings growth is associated with high dividend  
9 payout ratios. Second, while Mr. King's sustainable growth DCF model  
10 relies on data from Value Line, the results of his model are 182 basis points  
11 lower than the Value Line average projected ROE for Mr. King's proxy  
12 group, which shows that his results are inconsistent with his sources. Third,  
13 in his Direct Testimony, Mr. King enumerates several concerns with the  
14 sustainable growth model. In fact, in a recent case before the New York  
15 Public Service Commission, a jurisdiction that primarily relies on the  
16 sustainable growth model, Mr. King did not include this model in his  
17 analysis.

18

19 Q. PLEASE SUMMARIZE THE RELATIONSHIP BETWEEN PAYOUT RATIOS AND  
20 GROWTH RATES.

21 A. The underlying premise of Mr. King's calculation of sustainable growth is  
22 that future earnings will increase as the retention ratio (*i.e.*, the portion of  
23 earnings not paid out in dividends) increases. There are, however, several  
24 reasons why that may not be the case. Management decisions to conserve  
25 cash for capital investments, to manage the dividend payout for the purpose  
26 of minimizing future dividend reductions, or to signal future earnings  
27 prospects can and do influence the dividend payout (and therefore earnings

1 retention) in the near-term. Consequently, it is appropriate to determine  
2 whether the data used to calculate the sustainable growth rate support the  
3 assumption that higher earnings retention ratios necessarily are associated  
4 with higher future earnings growth rates.

5  
6 Q. DOES RESEARCH SUPPORT MR. KING'S VIEW ON THE RELATIONSHIP BETWEEN  
7 EARNINGS GROWTH RATES AND EARNINGS RETENTION RATIOS?

8 A. No, it does not. Contrary to Mr. King's assertion that "its conceptual  
9 foundation is unassailable,"<sup>52</sup> two articles appeared in Financial Analysts  
10 Journal in 2006, which addressed the theory that high dividend payouts (*i.e.*,  
11 low retention ratios) are associated with low future earnings growth.<sup>53</sup> Both  
12 of those articles cite a 2003 study<sup>54</sup> which found that, over the course of 130  
13 years of data, future earnings growth is associated *with high, rather than low*  
14 *dividend payout* ratios.<sup>55</sup> In summary, the findings of those articles  
15 demonstrate that there is a *negative*, not a *positive* relationship between  
16 earnings retention ratios and future earnings growth rates. As such, I believe  
17 that Mr. King's reliance on the sustainable growth rate DCF model is not  
18 appropriate.

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<sup>52</sup> Direct Testimony of Charles W. King, at 35.

<sup>53</sup> Ping Zhou, William Ruland, *Dividend Payout and Future Earnings Growth*, Financial Analysts Journal, Vol. 62, No. 3, 2006. See also Owain ap Gwilym, James Seaton, Karina Suddason, Stephen Thomas, *International Evidence on the Payout Ratio, Earnings, Dividends and Returns*, Financial Analysts Journal, Vol. 62, No. 1, 2006.

<sup>54</sup> Robert Arnott, Clifford Asness, *Surprise: Higher Dividends = Higher Earnings Growth*, Financial Analysts Journal, Vol. 59, No. 1, 2003.

<sup>55</sup> Since the payout ratio is the inverse of the retention ratio, the authors found that future earnings growth is negatively related to the retention ratio.

1

2 Q. DO YOU HAVE OTHER CONCERNS ABOUT MR. KING'S USE OF THE VALUE LINE  
3 DATA IN THE SUSTAINABLE GROWTH DCF MODEL?

4 A. Yes. Mr. King relies on Value Line projected data for the period from 2016-  
5 2018 to calculate his sustainable growth rate. While I generally agree with  
6 the use of projected data in the DCF model, Mr. King criticizes my use of  
7 forecasted interest rates for years beyond 2014 and describes such  
8 projections as "intrinsically speculative".<sup>56</sup> His use of projected data from  
9 this time period seems inconsistent with his criticism of my analysis. In order  
10 to assess whether the time period affects the results of Mr. King's analysis, I  
11 recreated Mr. King's sustainable growth rate DCF model substituting Value  
12 Line's 2013 data for the projected 2016-2018 data and have included that in  
13 my presentation of the modified results of Mr. King's approach. (*see*  
14 Exhibit\_\_\_ (AEB-2), Schedule 9)

15

16 Q. IS THERE OTHER EVIDENCE THAT SUGGESTS MR. KING'S SUSTAINABLE  
17 GROWTH DCF ANALYSIS DOES NOT PRODUCE REASONABLE RESULTS?

18 A. Yes. Mr. King states that the average projected ROE for the companies in  
19 my proxy group, as reported by Value Line, is 9.68 percent. That projection  
20 is 149 basis points higher than the mean results of Mr. King's sustainable  
21 growth rate analysis and 68 basis points higher than his ROE  
22 recommendation of 9.00 percent.

23

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<sup>56</sup> Direct Testimony of Charles W. King, at 34.

1 Q. HAVE YOU CONDUCTED A SIMILAR ANALYSIS FOR MR. KING'S PROXY GROUP?

2 A. Yes, I have. I relied on the Value Line projected return on shareholder  
3 equity for the period from 2016 through 2018 for Mr. King's proxy group of  
4 16 companies. As shown in Exhibit\_\_\_ (AEB-2), Schedule 10, the average  
5 projected return on shareholder equity for Mr. King's proxy group is 9.81  
6 percent. Therefore, while Mr. King relies on Value Line as the source of the  
7 sustainable growth rate used in this form of the DCF model, the average  
8 Value Line projected ROE for his proxy group is 173 basis points higher<sup>57</sup>  
9 than the average result of his Sustainable Growth DCF model.

10

11 Q. IS MR. KING'S USE OF THE SUSTAINABLE GROWTH MODEL CONSISTENT WITH  
12 HIS TESTIMONY AND APPROACH IN A PRIOR CASE?

13 A. No, it isn't. Mr. King enumerates a number of concerns with the  
14 Sustainable Growth Model in his Direct Testimony, including: (1) whether  
15 book value determines earnings growth; (2) the effect of unregulated  
16 activities on earnings and book value; (3) the use of book value growth to  
17 estimate earnings growth; (4) the inherent circularity of the sustainable  
18 growth calculation; and (5) reliance on Value Line as the sole source for  
19 information in performing the calculation.<sup>58</sup>

20

21 In spite of those concerns, Mr. King assigns 18.75 percent weight to the  
22 results of his sustainable growth DCF analysis in this case. Further, in  
23 another recent proceeding in New York, Mr. King did not rely on the  
24 sustainable growth rate in his DCF analysis, even though that jurisdiction has

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<sup>57</sup> See Exhibit CWK-2, Schedule 9.

<sup>58</sup> Direct Testimony of Charles W. King at 23.

1 historically placed significant emphasis on a sustainable growth DCF  
2 model.<sup>59</sup>

3  
4 Q. WHAT IS YOUR CONCLUSION REGARDING THE RELEVANCE OF THE  
5 SUSTAINABLE GROWTH DCF MODEL?

6 A. My principal conclusion is that Mr. King's sustainable growth DCF model  
7 does not produce a reliable estimate of the Cost of Equity for NSPM at this  
8 time. Based on the shortcomings of the model, I recommend that the  
9 results of Mr. King's sustainable growth DCF model should not be given  
10 any weight in determining the ROE for NSPM in this proceeding.

11  
12 **E. Flotation Costs**

13 Q. DOES MR. KING ADD FLOTATION COSTS TO HIS COST OF EQUITY ESTIMATE  
14 FOR NSPM?

15 A. Yes. Mr. King acknowledges that flotation costs are a legitimate cost of  
16 issuing equity that must be recovered either as an expense or as an adder to  
17 the ROE.<sup>60</sup> Mr. King calculates a flotation cost adjustment of seven basis  
18 points based on amortizing the flotation costs of Xcel Energy over the past  
19 ten years and dividing that amount by the total book value of Xcel Energy's  
20 common equity as calculated using Value Line data.

21  

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<sup>59</sup> State of New York Public Service Commission Case Nos. 13-E-0030, 13-G-0031, and 13-S-0032,  
Direct Testimony of Charles W. King, May, 31, 2013, pp. 23-24, 26-27

<sup>60</sup> Direct Testimony of Charles W. King, at 29.

1 Q. DO YOU AGREE WITH MR. KING THAT YOUR FLOTATION COST ADJUSTMENT  
2 OVER-RECOVERS FLOTATION COSTS FOR NSPM?

3 A. No, I do not. I disagree with his assertion that my method for calculating  
4 flotation costs results in over-recovery of those costs.  
5

6 Q. OVER WHAT PERIODS OF TIME ARE ISSUANCE AND FLOTATION COSTS  
7 RECOGNIZED?

8 A. The approach that Mr. King has relied on (*i.e.*, amortizing the flotation costs  
9 over a period of time) is a generally accepted treatment for the recovery of  
10 flotation costs associated with debt issuances. However, there is a difference  
11 between equity issuances and debt issuances that affects the flotation costs  
12 associated with the costs of debt and equity.  
13

14 The issuance costs associated with long-term debt reflect the incurrence of  
15 issuance costs that can be assigned a definite life or period of applicability.  
16 Those costs are amortized over the life of the debt issuance, either to  
17 maturity or upon retirement of the debt.  
18

19 The flotation costs associated with equity issuance, however, do not have a  
20 definite period of applicability, but rather have a permanent life. These costs  
21 permanently reduce the equity in the capital structure and therefore it is  
22 appropriate to recover flotation costs incurred in the sale of equity over the  
23 life of the equity capital, which is permanent.  
24

1 Q. WHY IS IT NOT APPROPRIATE TO AMORTIZE FLOTATION COSTS OVER A  
2 FINITE PERIOD OF TIME AS SUGGESTED BY MR. KING.

3 A. While amortization of flotation costs is theoretically a simple way to recover  
4 the costs of issuance, it is not an appropriate recovery of the flotation costs  
5 associated with equity issuances because the flotation cost is a permanent  
6 reduction to the equity capital of the company. That capital remains in  
7 common equity providing benefits to ratepayers over an indefinite period of  
8 time.

9

10 Since the actual book equity of a stock issuance is calculated as the market  
11 value less the flotation costs, the book equity of that issuance is always less  
12 than the market value of the stock. Therefore, investors can only earn their  
13 Cost of Equity in any year if the company is allowed to earn a return on the  
14 common equity that is higher than the required return. This is because the  
15 total common equity base has been permanently reduced by the amount of  
16 the flotation cost. As noted in New Regulatory Finance:

17 Unlike the case of bonds, common stock has no finite life so that  
18 flotation costs cannot be amortized and therefore must be  
19 recovered by way of an upward adjustment to the allowed return  
20 on equity.<sup>61</sup>

21

22 Further, a permanent adjustment is needed:

23

24 The following illustration ... shows that: (1) even if no further  
25 stock issues are contemplated, the flotation cost adjustment is still  
26 permanently required to keep shareholders whole ...<sup>62</sup>

27

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<sup>61</sup> Morin, Roger, New Regulatory Finance, Public Utilities Report, Inc. (2006), p. 327.

<sup>62</sup> *Ibid.* at 329.

1 Q. HOW DID YOU DERIVE THE FLOTATION COST PERCENTAGE USED IN YOUR  
2 CALCULATION OF THE FLOTATION COST ADJUSTMENT?

3 A. In order to establish a representative percentage of flotation costs, as  
4 discussed in my Direct Testimony, I calculated the flotation cost percentage  
5 of 5.281 percent based on the average flotation cost percentage of all stock  
6 issuances for Xcel Energy and NSP from 1949 to the present. This data is  
7 used to determine the percentage for the flotation cost adjustment. As  
8 shown in Exhibit\_\_\_ (AEB-2), Schedule 2, applying that flotation cost  
9 percentage to the current dividend yield for my proxy companies results in a  
10 flotation cost adjustment of 24 basis points.

11

12 Q. DOES YOUR APPROACH TO THE FLOTATION COST ADJUSTMENT HAVE WIDE  
13 SUPPORT?

14 A. Yes. New Regulatory Finance identifies the “conventional approach” to the  
15 flotation cost adjustment as follows;

16 For flotation costs of 5%, dividing the expected dividend by  
17 0.95 will produce the adjusted cost of equity capital.<sup>63</sup>

18

19 Further, “[I]ts use in regulatory proceedings by cost of capital witnesses is  
20 widespread” and it is discussed in several college level corporate finance  
21 textbooks such as Brigham and Ehrhardt (2005).<sup>64</sup>

22

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<sup>63</sup> Morin, Roger, New Regulatory Finance, Public Utilities Report, Inc. (2006), p. 329.

<sup>64</sup> *Ibid.*

1 Q. HOW DOES THAT PERCENTAGE COMPARE TO THE MEAN FLOATION COST  
2 PERCENTAGE FOR THE LAST THREE EQUITY ISSUANCES RELIED ON BY MR.  
3 KING?

4 A. As shown on Exhibit\_\_\_ (AEB-2), Schedule 2, the last three equity issuances  
5 for Xcel Energy were in 2002, 2008, and 2010. The mean flotation cost  
6 percentage associated with those three issuances is 5.266 percent, which is  
7 generally consistent with the flotation cost percentage over all equity  
8 issuances of NSP and Xcel Energy that I used (5.281percent) and results in  
9 the same flotation cost adjustment since these costs are used only to  
10 determine a rate to be applied to the dividend yield.  
11

#### 12 **F. Application of the Capital Asset Pricing Model**

13 Q. PLEASE SUMMARIZE MR. KING'S CAPM ANALYSIS AND RESULTS.

14 A. Mr. King's CAPM analysis produces an ROE estimate for NSPM of 9.04  
15 percent, based on a risk-free rate of 3.43 percent, a Beta coefficient of 0.67,  
16 and a Market Risk Premium of 8.43 percent.<sup>65</sup> Mr. King criticizes the  
17 CAPM due to concerns about the subjectivity of the inputs and assumptions.  
18 In particular, he expresses concern with whether Beta captures all the non-  
19 diversifiable risk associated with an investment,<sup>66</sup> and with the difficulty of  
20 estimating the equity risk premium on a forward-looking basis.<sup>67</sup> In spite of  
21 these reservations, Mr. King assigns the CAPM results 12.50 percent  
22 weighting in his calculation of the ROE for NSPM.  
23

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<sup>65</sup> Exhibit CWK-2, Schedule 6.

<sup>66</sup> Direct Testimony of Charles W. King, at 25.

<sup>67</sup> Direct Testimony of Charles W. King, at 26.

1 Q. DO YOU AGREE WITH THE RISK-FREE RATE MR. KING USES IN HIS CAPM  
2 ANALYSIS?

3 A. Not entirely. Mr. King uses the average yield on the 30-year Treasury  
4 security for the week from June 19 to June 25, 2013 of 3.43 percent as the  
5 risk-free rate in his CAPM analysis. While I have used a 30-day average  
6 current yield on the 30-year Treasury, I also have considered the projected  
7 yield on the 30-year Treasury bond for the 2013-2014 time period, as well as  
8 the projected yield for 2017-2019. Mr. King agrees that the CAPM requires  
9 forward-looking inputs for the equity risk premium, and yet he criticizes my  
10 use of projected Treasury yields as “intrinsically speculative”. As discussed  
11 in Section IV of my Rebuttal Testimony, this point is especially important  
12 under current market conditions, where investors are very concerned about  
13 the potential for rising interest rates and the implications for stock prices,  
14 especially for those stocks such as electric utilities that generate a  
15 significant portion of their total return through dividends.

16

17 Q. DO YOU HAVE ANY COMMENTS REGARDING THE MARKET RISK PREMIUM MR.  
18 KING USES IN HIS CAPM ANALYSIS?

19 A. Yes. Mr. King develops his Market Risk Premium (MRP) based on an  
20 average of the historical and projected returns for the equity markets. In his  
21 analysis, the historical MRP is calculated by subtracting the Treasury bond  
22 yield from the historical market return provided by Morningstar for the  
23 period from 1929-2010. The projected return MRP is derived using Value  
24 Line’s projected dividend yield and stock price appreciation for the next  
25 three to five years less the Treasury yield. Mr. King ultimately arrives at an  
26 MRP of 8.43 percent. While this estimate is within the range of equity risk  
27 premiums that I have employed in my CAPM analysis, I do not agree with

1 Mr. King's use of historical data to estimate the MRP, especially when  
2 current interest rate levels are much lower than those that prevailed during  
3 most of the historical period from 1929-2010. In addition, it is not clear why  
4 Mr. King did not include historical market returns through 2012 rather than  
5 2010.

6  
7 Q. WHAT IS YOUR CONCLUSION REGARDING MR. KING'S CAPM ANALYSIS?

8 A. My conclusion is that Mr. King's CAPM analysis understates the Cost of  
9 Equity for NSPM because he fails to take into consideration the likelihood  
10 of higher interest rates and the effect that would have on the CAPM results.  
11 Given the current market conditions and investors' uncertainty regarding the  
12 Federal Reserve's interest rate policy, I believe it is appropriate to include  
13 both current and projected Treasury yields in the CAPM analysis. By doing  
14 so, my CAPM analysis reflects investors' return requirements under both  
15 current and projected interest rate environments.

16  
17 Q. HOW WOULD MR. KING'S CAPM RESULTS BE AFFECTED BY THE USE OF  
18 PROJECTED TREASURY YIELDS?

19 A. As shown in Exhibit\_\_\_ (AEB-2), Schedule 11, the five-year projected  
20 Treasury Yield is 5.20 percent. Relying on that yield, holding the remainder  
21 of Mr. King's assumptions constant, the results of the CAPM would be 9.63  
22 percent.

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**G. Recent Returns in Other Jurisdictions**

Q. PLEASE SUMMARIZE MR. KING’S ANALYSIS OF RECENT RETURNS IN OTHER JURISDICTIONS.

A. Mr. King provides an analysis of returns for electric utilities in other jurisdictions based on information provided by NSPM in response to a data request. Mr. King observes that the average return on equity for electric utilities that were included in his analysis is 10.02 percent.<sup>68</sup> Although Mr. King expresses concern with the circular logic of using returns in other jurisdictions to set the return for NSPM, he assigns this result 12.50 percent weight in his calculation of NSPM’s Cost of Equity.

Q. PLEASE COMMENT ON MR. KING’S ANALYSIS OF AUTHORIZED RETURNS IN OTHER JURISDICTIONS.

A. While Mr. King screens his DCF proxy group to eliminate transmission and distribution (“T&D”) companies, Mr. King’s analysis of authorized returns in other jurisdictions includes returns for T&D companies. As explained earlier in my Rebuttal Testimony, the Company is an integrated electric utility, and investors have indicated that integrated utilities have different risk profiles than T&D companies. Accordingly, T&D companies should not be included in the analysis of returns from other jurisdictions.

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<sup>68</sup> Exhibit CWK-2, Schedule 7.

1 Q. HAVE YOU CONDUCTED AN ANALYSIS OF AUTHORIZED ROES THAT IS  
2 CONSISTENT WITH MR. KING'S PROXY GROUP SCREENING CRITERIA?

3 A. Yes. I began with the authorized ROEs reported in Mr. King's Exhibit 2,  
4 Schedule 7. I reviewed each company to determine whether or not the  
5 operating company owned regulated generation. That analysis identified five  
6 companies that do not own generation in the operating company for which  
7 the ROE was being established: Ameren Illinois; Commonwealth Edison  
8 Company; Baltimore Gas and Electric Company; Niagara Mohawk Power  
9 Company; and Narragansett Electric Company. Excluding the authorized  
10 ROEs for those companies, the average return for the integrated electric  
11 companies in Mr. King's analysis is 10.21 percent.

12

13 Q. WHAT IS YOUR RESPONSE TO MR. KING'S POSITION THAT THESE DATA ARE  
14 NOT RELEVANT DUE TO CONCERNS ABOUT CIRCULAR LOGIC?

15 A. Mr. King acknowledges the importance of the comparable investment  
16 standard on page 13 of his Direct Testimony. If utilities are to compete for  
17 equity capital, they must offer investors a reasonable opportunity to earn  
18 returns that are commensurate with those returns available from other  
19 utilities of similar risk.

20

21 Since we are focused on the actual judgments of investors, it is reasonable to  
22 rely on the same information that is readily available to investors. For that  
23 reason, I disagree with Mr. King that these data are not relevant. Investors  
24 carefully review the allowed ROEs and consider them as benchmarks against  
25 which the allowed return for NSPM in this case will be evaluated.

26

1 Q. DO YOU HAVE ANY OTHER COMMENTS WITH RESPECT TO MR. KING'S  
2 ANALYSIS OF ALLOWED RETURNS IN OTHER JURISDICTIONS?

3 A. Yes. Mr. King's ROE recommendation of 9.00 percent is more than 120  
4 basis points lower than the average of the ROEs that have been granted to  
5 integrated electric utilities in other jurisdictions. However, Mr. King does  
6 not offer any evidence to explain why NSPM's business risk is so much  
7 lower than the proxy group that investors would require 120 basis points less  
8 than the average ROE for other vertically-integrated electric utilities.  
9

10 Q. HAVE YOU REVIEWED THE AUTHORIZED ROES FOR THE COMPANIES IN MR.  
11 KING'S PROXY GROUP?

12 A. Yes, I have. As shown on Exhibit\_\_\_ (AEB-2), Schedule 12, the average of  
13 the most recent authorized ROE for the operating companies in Mr. King's  
14 proxy group is 10.21 percent, or 121 basis points higher than his ROE  
15 recommendation of 9.00 percent. This demonstrates that the companies  
16 that Mr. King considers to be risk comparable to NSPM have been awarded  
17 returns in the jurisdictions where they operate that are substantially higher  
18 than the ROE that Mr. King has recommended for NSPM in this  
19 proceeding.  
20

21 Q. WHAT IS YOUR CONCLUSION WITH RESPECT TO THE USEFULNESS OF  
22 AUTHORIZED ROES IN OTHER JURISDICTIONS?

23 A. While the Commission is certainly not bound by return awards in other  
24 jurisdictions, my view is that investors rely on this information as a relevant  
25 benchmark. Although I have not used these returns to establish my ROE  
26 recommendation, I have evaluated the reasonableness of my results and  
27 recommendation against these ROEs. My revised ROE recommendation of

1 10.25 percent is consistent with the prevailing level of authorized returns for  
2 vertically-integrated electric utilities in recent years.

3  
4 **H. Relevance of Bond Yield Plus Risk Premium Analysis**

5 Q. DID MR. KING UTILIZE A BOND YIELD PLUS RISK PREMIUM ANALYSIS TO  
6 ESTIMATE THE COST OF EQUITY FOR NSPM?

7 A. No, he did not. Mr. King argues that the Bond Yield plus Risk Premium  
8 analysis is based on circular logic. That is, the analysis requires knowledge of  
9 the required return to stocks in order to estimate the required return to  
10 stocks.<sup>69</sup> Mr. King also criticizes my use of forward-looking Treasury yields  
11 in the regression equation to estimate the Cost of Equity for NSPM.<sup>70</sup>

12  
13 Q. HAS MR. KING PREVIOUSLY GIVEN WEIGHT TO A BOND YIELD PLUS RISK  
14 PREMIUM ANALYSIS IN OTHER JURISDICTIONS?

15 A. Yes. In Maryland, for example, Mr. King recently gave weight to a Risk  
16 Premium analysis based on the relationship between public utility bond  
17 yields and the equity returns awarded to electric utilities by regulatory  
18 agencies.<sup>71</sup> Mr. King offered the same criticism of that methodology as he  
19 offers for the Bond Yield plus Risk Premium analysis in my Direct  
20 Testimony, expressing concerns about relying on returns in other  
21 jurisdictions as surrogates for the required ROE. In that case, however, Mr.  
22 King gave equal weight to the results of the sustainable growth DCF model  
23 and the risk premium approach in Maryland; 15.79 percent.<sup>72</sup>

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<sup>69</sup> Direct Testimony of Charles W. King, at 34.

<sup>70</sup> Direct Testimony of Charles W. King, at 35.

<sup>71</sup> Direct Testimony of Charles W. King, Baltimore Gas and Electric Company, October 12, 2012, at 17-18.

<sup>72</sup> Direct Testimony of Charles W. King, Baltimore Gas and Electric Company, Case No. 9299, Exhibit

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2 Q. WHAT IS YOUR RESPONSE TO MR. KING'S CRITICISM OF YOUR APPLICATION  
3 OF THE BOND YIELD PLUS RISK PREMIUM MODEL?

4 A. With regard to Mr. King's first concern, one purpose of my Bond Yield plus  
5 Risk Premium analysis is to demonstrate the inverse relationship between  
6 interest rates and the equity risk premium. In other words, as interest rates  
7 decline, the equity risk premium rises. As Mr. King points out, my risk  
8 premium analysis shows that a return on equity of 10.00 percent is  
9 reasonable given the current level of interest rates and the historical risk  
10 premium.<sup>73</sup> With respect to his concern about the use of forecasted  
11 Treasury yields, as discussed previously, Mr. King has also relied on  
12 forecasted data from Value Line for the 2016-18 time period to develop his  
13 sustainable growth DCF model. As such, Mr. King's second concern is not  
14 consistent with his own analyses.

15

16 Q. WHAT IS YOUR CONCLUSION REGARDING THE APPROPRIATENESS OF USING A  
17 BOND YIELD PLUS RISK PREMIUM ANALYSIS?

18 A. As discussed in my Direct Testimony, I used the Bond Yield Plus Risk  
19 Premium analysis as a means of corroborating the reasonableness of my  
20 DCF results.<sup>74</sup> While I do not rely on this analysis as my primary method for  
21 estimating the authorized ROE for NSPM, it does provide the Commission  
22 with a relevant benchmark that investors consider when they evaluate the  
23 authorized ROE for NSPM relative to that available from other comparable  
24 risk electric utilities. For that reason, I have continued to present this

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<sup>73</sup> CWK-2, Schedule 7, October 12, 2012.

<sup>74</sup> Direct Testimony of Charles W. King, at 35.

Direct Testimony of Ann E. Bulkley, at 25-26.

1 analysis in my updated results, and I believe that Mr. King's concerns with  
2 this method are misplaced.

3  
4 **I. Effect of Proposed Adjustments to Mr. King's Analyses**

5 Q. PLEASE SUMMARIZE THE ADJUSTMENTS THAT SHOULD BE MADE TO MR.  
6 KING'S ANALYSES.

7 A. There are several reasonable adjustments that should be made to Mr. King's  
8 Constant Growth DCF, CAPM, and Authorized Returns analyses that affect  
9 the overall results of those models. In addition, for the reasons discussed  
10 previously, I believe that Mr. King's "Multi-Stage" DCF results should not  
11 be afforded any weight. Similarly, based on Mr. King's own concerns about  
12 the Sustainable Growth DCF model and academic support for the use of  
13 earnings growth, I would not afford any weight to the results of Mr. King's  
14 Sustainable Growth DCF model. Finally, consistent with Mr. King's  
15 approach in Maryland Case No. 9299, I have applied the same weight to the  
16 Risk Premium model that I have relied on in my Rebuttal Testimony.

17  
18 Q. HOW DO YOUR PROPOSED ADJUSTMENTS TO MR. KING'S ANALYSES AFFECT  
19 HIS OVERALL RECOMMENDED ROE?

20 A. The results of those adjustments are presented in Exhibit\_\_\_ (AEB-2),  
21 Schedule 9 and are summarized in Table 8 (below). As shown in Table 8,  
22 these modifications to Mr. King's analysis result in an ROE of 9.73 percent,  
23 before adjustment for flotation costs, which is 88 basis points higher than  
24 the 8.85 percent result presented in Mr. King's Direct Testimony. The  
25 adjusted ROE, including flotation costs, would be 9.97 percent.

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**Table 8**  
**Modified King Results<sup>75</sup>**

Methodology	Exhibit ____(AEB-2),	Indication	Weighting	Weighting Indication	Composit e Indication
Constant Growth DCF					
Mean	Schedule 7	9.22%			
Median	Schedule 7	9.21%			
Average	Schedule 7	9.22%	5	46.08%	
3-Step DCF	Schedule 8	8.55%	0		
Sustainable Growth DCF					
Mean	Schedule 9	8.58%			
Median	Schedule 9	8.59%			
Average	Schedule 9	8.58%	0		
CAPM	Schedule 11	9.63%	2	19.26%	
Risk Premium	Schedule 5	10.44%	3	31.32%	
Recent ROE Awards	Schedule 13	10.04%	2	20.08%	
Total			12	116.75%	9.73%
Flotation Cost	Schedule 2				.24%
Adjusted Total					9.97%

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**VI. CAPITAL STRUCTURE AND COST OF SHORT TERM  
DEBT**

- 7 Q. PLEASE SUMMARIZE THE CAPITAL STRUCTURE PROPOSED BY MR. KING.
- 8 A. Mr. King proposes to rely on the Company's capital structure as of March
- 9 31, 2013 as the ratemaking capital structure in this case. At that time, the
- 10 Company's capital structure consisted of 45.24 percent long-term debt, 1.33
- 11 percent short-term debt, and 53.42 percent common equity.<sup>76</sup>

<sup>75</sup> See Exhibit \_(AEB-2), Schedule 6.  
<sup>76</sup> Direct Testimony of Charles W. King at 12.

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Q. IS THE CAPITAL STRUCTURE PROPOSED BY MR. KING CONSISTENT WITH THE COMPANY'S PROPOSED CAPITAL STRUCTURE?

A. The two structures are generally comparable. The Company proposed a capital structure consisting of 44.96 percent long-term debt, 2.48 percent short-term debt, and 52.56 percent common equity, based on budgeted amounts. The Company does not object to the proposed adjustments to the capital structure.

Q. DOES THE SHORT-TERM DEBT RATE PROPOSED BY MR. KING RECOVER ALL OF THE COMPANY'S SHORT-TERM DEBT COSTS?

A. No, it does not. As discussed in his Direct Testimony, Mr. King estimates the short-term debt balances for the 24 months from April 2011 through March 2013.<sup>77</sup> The Company calculates the cost of short-term debt based on two components: (1) interest expense, and (2) financing fees. Mr. King's estimated cost of short-term debt does not consider the monthly financing fees on the Company's short-term credit agreement.

Q. HOW WAS THE COST OF SHORT-TERM DEBT ESTIMATED BY THE COMPANY?

A. The 0.75 percent cost of short-term debt includes the interest expense cost (0.44 percent) and the monthly financing fees (0.71 percent) associated with having a credit facility to provide back-up liquidity for the Company. The calculation is shown on Exhibit. (AEB-2), Schedule 14. The 0.44 percent interest expense is based on the July 2012 Global Insight forecast for the London Interbank Offer Rate ("LIBOR"). The financing fee of 0.31 percent

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<sup>77</sup> Direct Testimony of Charles W. King at 12.

1 reflects the fixed annual commitment fees for our “Amended and Restated  
2 Credit Agreement.” The financing fee should be included because it is part  
3 of the cost of the Company’s short term debt.  
4

5 Q. WHAT WOULD THE SHORT TERM DEBT COMPONENT OF THE CAPITAL  
6 STRUCTURE BE IF THE COMMISSION ADOPTED MR. KING’S RECOMMENDATION  
7 TO USE AN AVERAGE SHORT TERM INTEREST RATE?

8 A. If the Commission concludes that a historic average interest rate should be  
9 used, Mr. King’s 0.36 percent rate (Exhibit CWK-1, Schedule 2) would be  
10 substituted for the Company’s 0.44 percent interest expense, reducing the  
11 short-term rate by 8 basis points from 0.75 percent to 0.67 percent.  
12

## 13 VII. SUMMARY AND RECOMMENDATION

14

15 Q. PLEASE SUMMARIZE YOUR ANALYTICAL RESULTS AND CONCLUSIONS.

16 A. Based on the results of my updated analyses as shown on Table 9, I have  
17 revised my recommended ROE range to between 10.00 percent and 10.50  
18 percent. The low end of the range is supported by the results of the Multi-  
19 Stage DCF model, while the upper boundary is supported by the results of  
20 the Capital Asset Pricing Model and the mean high results of the Constant  
21 Growth DCF analysis. As discussed earlier in my Testimony, the requested  
22 ROE has been reduced from 10.60 percent to 10.25 percent. While this  
23 request is somewhat conservative in my view, it does fall within the range of  
24 my results and provides the Company with a reasonable return under current  
25 market conditions.

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**Table 9**  
**Summary of Analytical Results**

<b>Constant Growth DCF - Including Flotation Costs</b>				
	Mean (Low Growth)	Mean	Mean (High Growth)	
30-Day Average Price	8.47%	9.73%	11.34%	
90-Day Average Price	8.32%	9.58%	11.19%	
180-Day Average Price	8.49%	9.75%	11.36%	
<b>Multi-Stage DCF - Including Flotation Costs</b>				
	Mean (Low Growth)	Mean	Mean (High Growth)	
30-Day Average Price	9.64%	9.98%	10.52%	
90-Day Average Price	9.50%	9.83%	10.35%	
180-Day Average Price	9.67%	10.02%	10.55%	
<b>Capital Asset Pricing Model</b>				
	<b>Current Risk-Free Rate (3.46%)</b>	<b>2013-2014 Projected Risk Free Rate (3.73%)</b>	<b>2015-2019 Projected Risk Free Rate (5.20%)</b>	<b>Mean</b>
Bloomberg Beta	10.56%	10.64%	11.04%	10.74%
Value Line Beta	10.41%	10.49%	10.91%	10.60%
<b>Bond Yield Plus Risk Premium</b>				
Risk Premium	10.17%	10.28%	10.87%	10.44%

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4 Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

5 A. Yes, it does.

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STATE OF NORTH DAKOTA  
BEFORE THE  
PUBLIC SERVICE COMMISSION

In the Matter of the Application of Northern )  
States Power Company, a Minnesota Corporation )  
For Authority to Increase Rates for Electric Service ) Case No. PU-12-813  
in North Dakota )

AFFIDAVIT OF  
Ann E. Bulkley

I, the undersigned, being duly sworn, depose and say that the foregoing is the Rebuttal Testimony of the undersigned, and that such Rebuttal Testimony and the exhibits or schedules sponsored by me to the best of my knowledge, information and belief, are true, correct, accurate and complete, and I hereby adopt said testimony as if given by me in formal hearing, under oath.

*Ann E. Bulkley*  
Ann E. Bulkley

Subscribed and sworn to before me, this 9<sup>th</sup> day of August 2013.

*Joanne P. Bickford*  
Notary Public

JOANNE P. BICKFORD  
NOTARY PUBLIC  
COMMONWEALTH OF MASSACHUSETTS  
MY COMMISSION EXPIRES  
OCTOBER 15, 2015



30 DAY CONSTANT GROWTH DCF

Company		[1] Annualized Dividend	[2] Stock Price	[3] Dividend Yield	[4] Expected Dividend Yield	[5] Value Line EPS Growth	[6] First Call EPS Growth	[7] Zacks EPS Growth	[8] Average Growth Rate	[9] Low DCF ROE	[10] Mean DCF ROE	[11] High DCF ROE
ALLETE, Inc.	ALE	\$1.90	\$49.06	3.87%	4.00%	7.00%	6.00%	6.50%	6.50%	9.99%	10.50%	11.01%
American Electric Power Company, Inc.	AEP	\$1.96	\$45.10	4.35%	4.43%	4.50%	3.82%	3.56%	3.96%	7.98%	8.39%	8.94%
Cleco Corporation	CNL	\$1.45	\$45.75	3.17%	3.28%	5.50%	8.00%	8.00%	7.17%	8.76%	10.45%	11.30%
Empire District Electric Company	EDE	\$1.00	\$22.15	4.51%	4.60%	5.00%	3.00%	3.00%	3.67%	7.58%	8.26%	9.63%
FirstEnergy Corporation	FE	\$2.20	\$37.56	5.86%	5.92%	3.50%	2.63%	0.60%	2.24%	6.48%	8.17%	9.46%
Great Plains Energy Inc.	GXP	\$0.87	\$22.71	3.83%	3.95%	6.50%	6.26%	6.19%	6.32%	10.14%	10.27%	10.45%
Hawaiian Electric Industries, Inc.	HE	\$1.24	\$25.09	4.94%	5.04%	5.50%	2.40%	3.70%	3.87%	7.40%	8.90%	10.58%
IDACORP, Inc.	IDA	\$1.52	\$48.15	3.16%	3.21%	2.00%	4.00%	4.00%	3.33%	5.19%	6.54%	7.22%
Otter Tail Corporation	OTTR	\$1.19	\$28.25	4.21%	4.45%	21.50%	6.00%	6.00%	11.17%	10.34%	15.61%	26.16%
Pinnacle West Capital Corporation	PNW	\$2.18	\$55.72	3.91%	4.01%	5.00%	5.45%	4.45%	4.97%	8.45%	8.98%	9.47%
Portland General Electric Company	POR	\$1.10	\$30.59	3.60%	3.69%	3.50%	5.34%	6.53%	5.12%	7.16%	8.81%	10.24%
Southern Company	SO	\$2.03	\$43.98	4.62%	4.72%	4.50%	4.67%	4.61%	4.59%	9.22%	9.32%	9.39%
Westar Energy, Inc.	WR	\$1.36	\$31.50	4.32%	4.42%	6.00%	3.90%	4.31%	4.74%	8.30%	9.16%	10.45%
PROXY GROUP MEAN				4.18%	4.29%	6.15%	4.73%	4.73%	5.20%	8.23%	9.49%	11.10%
Flotation Cost										0.24%	0.24%	0.24%
										8.47%	9.73%	11.34%

Notes

- [1] Source: Bloomberg  
[2] Source: Bloomberg. Based on indicated number of days historical average as of July 12, 2013.  
[3] Equals Col. [1]/Col. [2]  
[4] Equals Col. [3] x (1 + 0.5 x Col. [8])  
[5] Source: Value Line  
[6] Source: First Call  
[7] Source: Zacks  
[8] Equals Avg (Col. [5], [6], [7])  
[9] Equals Col. [3] x (1 + 0.5 x (Minimum (Col. [5], [6], [7]))) + Minimum (Col. [5], [6], [7])  
[10] Equals Col. [4] + Col. [8]  
[11] Equals Col. [3] x (1 + 0.5 x (Maximum (Col. [5], [6], [7]))) + Maximum(Col. [5], [6], [7])

90 DAY CONSTANT GROWTH DCF

Company		[1] Annualized Dividend	[2] Stock Price	[3] Dividend Yield	[4] Expected Dividend Yield	[5] Value Line EPS Growth	[6] First Call EPS Growth	[7] Zacks EPS Growth	[8] Average Growth Rate	[9] Low DCF ROE	[10] Mean DCF ROE	[11] High DCF ROE
ALLETE, Inc.	ALE	\$1.90	\$49.34	3.85%	3.98%	7.00%	6.00%	6.50%	6.50%	9.97%	10.48%	10.99%
American Electric Power Company, Inc.	AEP	\$1.96	\$47.65	4.11%	4.19%	4.50%	3.82%	3.56%	3.96%	7.75%	8.15%	8.71%
Cleco Corporation	CNL	\$1.45	\$46.46	3.12%	3.23%	5.50%	8.00%	8.00%	7.17%	8.71%	10.40%	11.25%
Empire District Electric Company	EDE	\$1.00	\$22.30	4.48%	4.57%	5.00%	3.00%	3.00%	3.67%	7.55%	8.23%	9.60%
FirstEnergy Corporation	FE	\$2.20	\$41.38	5.32%	5.38%	3.50%	2.63%	0.60%	2.24%	5.93%	7.62%	8.91%
Great Plains Energy Inc.	GXP	\$0.87	\$23.14	3.76%	3.88%	6.50%	6.26%	6.19%	6.32%	10.07%	10.20%	10.38%
Hawaiian Electric Industries, Inc.	HE	\$1.24	\$26.66	4.65%	4.74%	5.50%	2.40%	3.70%	3.87%	7.11%	8.61%	10.28%
IDACORP, Inc.	IDA	\$1.52	\$48.10	3.16%	3.21%	2.00%	4.00%	4.00%	3.33%	5.19%	6.55%	7.22%
Otter Tail Corporation	OTTR	\$1.19	\$29.65	4.01%	4.24%	21.50%	6.00%	6.00%	11.17%	10.13%	15.40%	25.94%
Pinnacle West Capital Corporation	PNW	\$2.18	\$57.67	3.78%	3.87%	5.00%	5.45%	4.45%	4.97%	8.31%	8.84%	9.33%
Portland General Electric Company	POR	\$1.10	\$30.86	3.56%	3.66%	3.50%	5.34%	6.53%	5.12%	7.13%	8.78%	10.21%
Southern Company	SO	\$2.03	\$45.72	4.44%	4.54%	4.50%	4.67%	4.61%	4.59%	9.04%	9.14%	9.21%
Westar Energy, Inc.	WR	\$1.36	\$32.62	4.17%	4.27%	6.00%	3.90%	4.31%	4.74%	8.15%	9.01%	10.29%
PROXY GROUP MEAN				4.03%	4.14%	6.15%	4.73%	4.73%	5.20%	8.08%	9.34%	10.95%
Flotation Cost										0.24%	0.24%	0.24%
										8.32%	9.58%	11.19%

Notes

- [1] Source: Bloomberg  
 [2] Source: Bloomberg. Based on indicated number of days historical average as of July 12, 2013.  
 [3] Equals Col. [1]/Col. [2]  
 [4] Equals Col. [3] x (1 + 0.5 x Col. [8])  
 [5] Source: Value Line  
 [6] Source: First Call  
 [7] Source: Zacks  
 [8] Equals Avg (Col. [5], [6], [7])  
 [9] Equals Col. [3] x (1 + 0.5 x (Minimum (Col. [5], [6], [7]))) + Minimum (Col. [5], [6], [7])  
 [10] Equals Col. [4] + Col. [8]  
 [11] Equals Col. [3] x (1 + 0.5 x (Maximum (Col. [5], [6], [7]))) + Maximum(Col. [5], [6], [7])

180 DAY CONSTANT GROWTH DCF

Company		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
		Annualized Dividend	Stock Price	Dividend Yield	Expected Dividend Yield	Value Line EPS Growth	First Call EPS Growth	Zacks EPS Growth	Average Growth Rate	Low DCF ROE	Mean DCF ROE	High DCF ROE
ALLETE, Inc.	ALE	\$1.90	\$45.99	4.13%	4.27%	7.00%	6.00%	6.50%	6.50%	10.26%	10.77%	11.28%
American Electric Power Company, Inc.	AEP	\$1.96	\$45.68	4.29%	4.38%	4.50%	3.82%	3.56%	3.96%	7.93%	8.34%	8.89%
Cleco Corporation	CNL	\$1.45	\$44.02	3.29%	3.41%	5.50%	8.00%	8.00%	7.17%	8.88%	10.58%	11.43%
Empire District Electric Company	EDE	\$1.00	\$21.57	4.64%	4.72%	5.00%	3.00%	3.00%	3.67%	7.71%	8.39%	9.75%
FirstEnergy Corporation	FE	\$2.20	\$41.36	5.32%	5.38%	3.50%	2.63%	0.60%	2.24%	5.93%	7.62%	8.91%
Great Plains Energy Inc.	GXP	\$0.87	\$22.08	3.94%	4.06%	6.50%	6.26%	6.19%	6.32%	10.25%	10.38%	10.57%
Hawaiian Electric Industries, Inc.	HE	\$1.24	\$26.25	4.72%	4.82%	5.50%	2.40%	3.70%	3.87%	7.18%	8.68%	10.35%
IDACORP, Inc.	IDA	\$1.52	\$46.17	3.29%	3.35%	2.00%	4.00%	4.00%	3.33%	5.33%	6.68%	7.36%
Otter Tail Corporation	OTTR	\$1.19	\$27.63	4.31%	4.55%	21.50%	6.00%	6.00%	11.17%	10.44%	15.71%	26.27%
Pinnacle West Capital Corporation	PNW	\$2.18	\$55.00	3.96%	4.06%	5.00%	5.45%	4.45%	4.97%	8.50%	9.03%	9.52%
Portland General Electric Company	POR	\$1.10	\$29.24	3.76%	3.86%	3.50%	5.34%	6.53%	5.12%	7.33%	8.98%	10.42%
Southern Company	SO	\$2.03	\$44.77	4.53%	4.64%	4.50%	4.67%	4.61%	4.59%	9.14%	9.23%	9.31%
Westar Energy, Inc.	WR	\$1.36	\$31.01	4.39%	4.49%	6.00%	3.90%	4.31%	4.74%	8.37%	9.23%	10.52%
		PROXY GROUP MEAN		4.20%	4.31%	6.15%	4.73%	4.73%	5.20%	8.25%	9.51%	11.12%
									Flotation Cost	0.24%	0.24%	0.24%
										8.49%	9.75%	11.36%

Notes

- [1] Source: Bloomberg
- [2] Source: Bloomberg. Based on indicated number of days historical average as of July 12, 2013.
- [3] Equals Col. [1]/Col. [2]
- [4] Equals Col. [3] x (1 + 0.5 x Col. [8])
- [5] Source: Value Line
- [6] Source: First Call
- [7] Source: Zacks
- [8] Equals Avg (Col. [5], [6], [7])
- [9] Equals Col. [3] x (1 + 0.5 x (Minimum (Col. [5], [6], [7]))) + Minimum (Col. [5], [6], [7])
- [10] Equals Col. [4] + Col. [8]
- [11] Equals Col. [3] x (1 + 0.5 x (Maximum (Col. [5], [6], [7]))) + Maximum(Col. [5], [6], [7])

FLOTATION COST ADJUSTMENT

Flotation Costs from Inception to Date

Date	Shares Issued	Market Price	Offering Price	Underwriting Discount	Offering Expense	Net Proceeds	Total Flotation Costs	Gross Equity Issue before Costs	Net Proceeds	Flotation Cost Percentage
11/16/1949	1,584,238	\$10.750	\$10.250	\$0.124	\$0.137	\$9,989	\$1,205,605	\$17,030,559	\$15,824,953	7.079%
6/4/1952	1,108,966	\$10.500	\$10.500	\$0.098	\$0.162	\$10,240	\$288,331	\$11,644,143	\$11,355,812	2.476%
4/14/1954	1,219,856	\$15.250	\$14.000	\$0.060	\$0.124	\$13,816	\$1,749,274	\$16,602,804	\$16,853,530	9.403%
2/29/1956	670,920	\$17.825	\$16.750	\$0.050	\$0.221	\$16,479	\$903,058	\$11,959,149	\$11,056,091	7.551%
7/22/1959	952,033	\$23.375	\$22.000	\$0.069	\$0.191	\$21,740	\$1,556,574	\$22,253,771	\$20,697,197	6.995%
7/28/1965	772,008	\$35.250	\$33.000	\$0.092	\$0.225	\$32,683	\$1,981,745	\$27,213,282	\$25,231,537	7.282%
1/22/1969	1,080,811	\$29.000	\$27.000	\$0.119	\$0.187	\$26,694	\$2,492,350	\$31,343,519	\$28,851,169	7.952%
10/21/1970	1,729,298	\$23.125	\$21.500	\$0.175	\$0.149	\$21,176	\$3,370,402	\$39,990,016	\$36,619,614	8.428%
7/26/1972	1,902,228	\$25.000	\$23.500	\$0.129	\$0.166	\$23,205	\$3,414,499	\$47,555,700	\$44,141,201	7.180%
10/10/1973	2,092,451	\$25.825	\$24.500	\$0.128	\$0.153	\$24,219	\$3,360,476	\$54,037,547	\$50,677,071	6.219%
11/20/1974	2,300,000	\$17.625	\$17.500	\$0.910	\$0.069	\$16,521	\$2,539,200	\$40,537,500	\$37,998,300	6.264%
8/14/1975	1,750,000	\$23.000	\$23.000	\$0.740	\$0.077	\$22,183	\$1,429,750	\$40,250,000	\$38,820,250	3.552%
6/3/1976	2,000,000	\$24.000	\$24.000	\$0.720	\$0.064	\$23,216	\$1,568,000	\$48,000,000	\$46,432,000	3.267%
5/31/1993	3,041,955	\$44.125	\$43.625	\$1.200	\$0.048	\$42,377	\$5,317,337	\$134,226,264	\$128,908,927	3.961%
9/23/1997	4,500,000	\$49.938	\$49.563	\$1.230	\$0.133	\$48,200	\$7,821,000	\$224,721,000	\$216,900,000	3.480%
9/29/1997	400,000	\$50.500	\$49.563	\$1.230	\$0.133	\$48,200	\$920,000	\$20,200,000	\$19,280,000	4.554%
2/25/2002	20,000,000	\$22.950	\$22.500	\$0.730	\$0.015	\$21,755	\$23,900,000	\$459,000,000	\$435,100,000	5.207%
9/9/2008	17,250,000	\$20.860	\$20.200	\$0.100	\$0.006	\$20,094	\$13,218,352	\$359,835,000	\$346,616,648	3.673%
8/3/2010	21,850,000	\$22.100	\$21.500	\$0.645	\$0.013	\$20,571	\$33,407,927	\$482,885,000	\$449,477,073	6.918%
<b>Weighted Average Flotation Costs</b>							<b>\$110,443,880</b>	<b>\$2,091,285,255</b>	<b>\$1,980,841,375</b>	<b>5.281%</b>

The flotation adjustment is derived by dividing the dividend yield by 1-F (where F = flotation costs expressed in percentage terms), or by 0.9472, and adding that result to the constant growth rate to determine the cost of equity. Using the formulas shown previously in my testimony, the Constant Growth DCF calculation is modified as follows to accommodate an adjustment for flotation costs:

Source: Company data.

[1] This issuance was structured as a forward equity sale. The spread between the initial forward sale price (i.e., \$20.855) and the actual forward settle price (i.e., \$20.584) is reflected in the net proceeds.

FLOTATION COST ADJUSTMENT

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
		Stock Price	Annualized Dividend	Dividend Yield	Expected Dividend Yield	Expected Dividend Yield Adjusted for Flotation Costs	Value Line EPS Growth	First Call EPS Growth	Zacks EPS Growth	Average Growth Estimate	DCF k(e)	Flotation Adjusted DCF k(e)
ALLETE, Inc.	ALE	\$49.06	\$1.90	3.87%	4.00%	4.22%	7.00%	6.00%	6.50%	6.50%	10.50%	10.72%
American Electric Power Company, Inc.	AEP	\$45.10	\$1.96	4.35%	4.43%	4.68%	4.50%	3.82%	3.56%	3.96%	8.39%	8.64%
Cleco Corporation	CNL	\$45.75	\$1.45	3.17%	3.28%	3.47%	5.50%	8.00%	8.00%	7.17%	10.45%	10.63%
Empire District Electric Company	EDE	\$22.15	\$1.00	4.51%	4.60%	4.85%	5.00%	3.00%	3.00%	3.67%	8.26%	8.52%
FirstEnergy Corporation	FE	\$37.56	\$2.20	5.86%	5.92%	6.25%	3.50%	2.63%	0.60%	2.24%	8.17%	8.50%
Great Plains Energy Inc.	GXP	\$22.71	\$0.87	3.83%	3.95%	4.17%	6.50%	6.26%	6.19%	6.32%	10.27%	10.49%
Hawaiian Electric Industries, Inc.	HE	\$25.09	\$1.24	4.94%	5.04%	5.32%	5.50%	2.40%	3.70%	3.87%	8.90%	9.18%
IDACORP, Inc.	IDA	\$48.15	\$1.52	3.16%	3.21%	3.39%	2.00%	4.00%	4.00%	3.33%	6.54%	6.72%
Otter Tail Corporation	OTTR	\$28.25	\$1.19	4.21%	4.45%	4.69%	21.50%	6.00%	6.00%	11.17%	15.61%	15.86%
Pinnacle West Capital Corporation	PNW	\$55.72	\$2.18	3.91%	4.01%	4.23%	5.00%	5.45%	4.45%	4.97%	8.98%	9.20%
Portland General Electric Company	POR	\$30.59	\$1.10	3.60%	3.69%	3.89%	3.50%	5.34%	6.53%	5.12%	8.81%	9.02%
Southern Company	SO	\$43.98	\$2.03	4.62%	4.72%	4.98%	4.50%	4.67%	4.61%	4.59%	9.32%	9.58%
Westar Energy, Inc.	WR	\$31.50	\$1.36	4.32%	4.42%	4.67%	6.00%	3.90%	4.31%	4.74%	9.16%	9.40%
PROXY GROUP MEAN				4.18%	4.29%	4.53%	6.15%	4.73%	4.73%	5.20%	9.49%	9.73%
MEAN												9.73%
UNADJUSTED CONSTANT GROWTH DCF MEAN												9.49%
DIFFERENCE (FLOTATION COST ADJUSTMENT)												[12] 0.24%

[1] Source: Bloomberg, 30-day average price  
 [2] Source: Bloomberg  
 [3] Equals Col. [1] / Col. [2]  
 [4] Equals Col. [3] x [1 + (.5 x Col. [9])]  
 [5] Equals [Expected Dividend Yield] / [1 - Flotation Cost Percentage]  
 [6] Source: Value Line  
 [7] Source: First Call  
 [8] Source: Zacks  
 [9] Average of columns [6], [7], [8]  
 [10] = Column [4] + Column [9]  
 [11] = Column [5] + Column [9]  
 [12] = Col. [11] - Col. [10]

30-DAY MULTI-STAGE DCF – MEAN GROWTH RATE

Inputs		[1]	[2]	[3]	[4]	[4]	[4]	[4]	[4]	[5]	[6]
Company	Ticker	Stock Price	Annualized Dividend	First Stage Growth	Second Stage Growth					Third Stage Growth	ROE
					Year 6	Year 7	Year 8	Year 9	Year 10		
ALLETE, Inc.	ALE	\$49.06	\$1.90	6.50%	6.32%	6.13%	5.95%	5.77%	5.58%	5.40%	9.77%
American Electric Power Company, Inc.	AEP	\$45.10	\$1.96	3.96%	4.20%	4.44%	4.68%	4.92%	5.16%	5.40%	9.58%
Cleco Corporation	CNL	\$45.75	\$1.45	7.17%	6.87%	6.58%	6.28%	5.99%	5.69%	5.40%	9.13%
Empire District Electric Company	EDE	\$22.15	\$1.00	3.67%	3.96%	4.24%	4.53%	4.82%	5.11%	5.40%	9.67%
FirstEnergy Corporation	FE	\$37.56	\$2.20	2.24%	2.77%	3.30%	3.82%	4.35%	4.87%	5.40%	10.49%
Great Plains Energy Inc.	GXP	\$22.71	\$0.87	6.32%	6.16%	6.01%	5.86%	5.71%	5.55%	5.40%	9.67%
Hawaiian Electric Industries, Inc.	HE	\$25.09	\$1.24	3.87%	4.12%	4.38%	4.63%	4.89%	5.14%	5.40%	10.14%
IDACORP, Inc.	IDA	\$48.15	\$1.52	3.33%	3.68%	4.02%	4.37%	4.71%	5.06%	5.40%	8.29%
Otter Tail Corporation	OTTR	\$28.25	\$1.19	11.17%	10.21%	9.24%	8.28%	7.32%	6.36%	5.40%	11.62%
Pinnacle West Capital Corporation	PNW	\$55.72	\$2.18	4.97%	5.04%	5.11%	5.18%	5.26%	5.33%	5.40%	9.41%
Portland General Electric Company	POR	\$30.59	\$1.10	5.12%	5.17%	5.22%	5.26%	5.31%	5.35%	5.40%	9.12%
Southern Company	SO	\$43.98	\$2.03	4.59%	4.73%	4.86%	5.00%	5.13%	5.27%	5.40%	10.03%
Westar Energy, Inc.	WR	\$31.50	\$1.36	4.74%	4.85%	4.96%	5.07%	5.18%	5.29%	5.40%	9.77%
MEAN											9.75%
FLOTATION COST											0.24%
											9.98%

Notes

- [1] Source: Bloomberg. Based on indicated number of days historical average.
- [2] Source: Bloomberg.
- [3] Average of EPS Growth Rates from Value Line, Zacks, and First Call
- [4] Interpolating Growth Rates: Col. [3] - ((Col. [3] - Col. [5]) / 6) \* (Year - 5)
- [5] Long-term GDP Growth Rate
- [6] Calculated ROE

90-DAY MULTI-STAGE DCF -- MEAN GROWTH RATE

Inputs		[1]	[2]	[3]	[4]	[4]	[4]	[4]	[4]	[5]	[6]
Company	Ticker	Stock Price	Annualized Dividend	First Stage Growth	Second Stage Growth					Third Stage Growth	ROE
					Year 6	Year 7	Year 8	Year 9	Year 10		
ALLETE, Inc.	ALE	\$49.34	\$1.90	6.50%	6.32%	6.13%	5.95%	5.77%	5.58%	5.40%	9.74%
American Electric Power Company, Inc.	AEP	\$47.65	\$1.96	3.96%	4.20%	4.44%	4.68%	4.92%	5.16%	5.40%	9.36%
Cleco Corporation	CNL	\$46.46	\$1.45	7.17%	6.87%	6.58%	6.28%	5.99%	5.69%	5.40%	9.07%
Empire District Electric Company	EDE	\$22.30	\$1.00	3.67%	3.96%	4.24%	4.53%	4.82%	5.11%	5.40%	9.64%
FirstEnergy Corporation	FE	\$41.38	\$2.20	2.24%	2.77%	3.30%	3.82%	4.35%	4.87%	5.40%	10.01%
Great Plains Energy Inc.	GXP	\$23.14	\$0.87	6.32%	6.16%	6.01%	5.86%	5.71%	5.55%	5.40%	9.59%
Hawaiian Electric Industries, Inc.	HE	\$26.66	\$1.24	3.87%	4.12%	4.38%	4.63%	4.89%	5.14%	5.40%	9.86%
IDACORP, Inc.	IDA	\$48.10	\$1.52	3.33%	3.68%	4.02%	4.37%	4.71%	5.06%	5.40%	8.30%
Otter Tail Corporation	OTTR	\$29.65	\$1.19	11.17%	10.21%	9.24%	8.28%	7.32%	6.36%	5.40%	11.34%
Pinnacle West Capital Corporation	PNW	\$57.67	\$2.18	4.97%	5.04%	5.11%	5.18%	5.26%	5.33%	5.40%	9.27%
Portland General Electric Company	POR	\$30.86	\$1.10	5.12%	5.17%	5.22%	5.26%	5.31%	5.35%	5.40%	9.09%
Southern Company	SO	\$45.72	\$2.03	4.59%	4.73%	4.86%	5.00%	5.13%	5.27%	5.40%	9.85%
Westar Energy, Inc.	WR	\$32.62	\$1.36	4.74%	4.85%	4.96%	5.07%	5.18%	5.29%	5.40%	9.61%
MEAN											9.60%
FLOTATION COST											0.24%
											9.83%

Notes

- [1] Source: Bloomberg. Based on indicated number of days historical average.
- [2] Source: Bloomberg.
- [3] Average of EPS Growth Rates from Value Line, Zacks, and First Call
- [4] Interpolating Growth Rates: Col. [3] - ((Col. [3] - Col. [5]) / 6) \* (Year - 5)
- [5] Long-term GDP Growth Rate
- [6] Calculated ROE

180-DAY MULTI-STAGE DCF -- MEAN GROWTH RATE

Inputs		[1]	[2]	[3]	[4]	[4]	[4]	[4]	[4]	[5]	[6]
Company	Ticker	Stock Price	Annualized Dividend	First Stage Growth	Second Stage Growth					Third Stage Growth	ROE
					Year 6	Year 7	Year 8	Year 9	Year 10		
ALLETE, Inc.	ALE	\$45.99	\$1.90	6.50%	6.32%	6.13%	5.95%	5.77%	5.58%	5.40%	10.06%
American Electric Power Company, Inc.	AEP	\$45.68	\$1.96	3.96%	4.20%	4.44%	4.68%	4.92%	5.16%	5.40%	9.53%
Cleco Corporation	CNL	\$44.02	\$1.45	7.17%	6.87%	6.58%	6.28%	5.99%	5.69%	5.40%	9.28%
Empire District Electric Company	EDE	\$21.57	\$1.00	3.67%	3.96%	4.24%	4.53%	4.82%	5.11%	5.40%	9.79%
FirstEnergy Corporation	FE	\$41.36	\$2.20	2.24%	2.77%	3.30%	3.82%	4.35%	4.87%	5.40%	10.01%
Great Plains Energy Inc.	GXP	\$22.08	\$0.87	6.32%	6.16%	6.01%	5.86%	5.71%	5.55%	5.40%	9.79%
Hawaiian Electric Industries, Inc.	HE	\$26.25	\$1.24	3.87%	4.12%	4.38%	4.63%	4.89%	5.14%	5.40%	9.93%
IDACORP, Inc.	IDA	\$46.17	\$1.52	3.33%	3.68%	4.02%	4.37%	4.71%	5.06%	5.40%	8.42%
Otter Tail Corporation	OTTR	\$27.63	\$1.19	11.17%	10.21%	9.24%	8.28%	7.32%	6.36%	5.40%	11.76%
Pinnacle West Capital Corporation	PNW	\$55.00	\$2.18	4.97%	5.04%	5.11%	5.18%	5.26%	5.33%	5.40%	9.46%
Portland General Electric Company	POR	\$29.24	\$1.10	5.12%	5.17%	5.22%	5.26%	5.31%	5.35%	5.40%	9.29%
Southern Company	SO	\$44.77	\$2.03	4.59%	4.73%	4.86%	5.00%	5.13%	5.27%	5.40%	9.94%
Westar Energy, Inc.	WR	\$31.01	\$1.36	4.74%	4.85%	4.96%	5.07%	5.18%	5.29%	5.40%	9.84%
MEAN											9.78%
FLOTATION COST											0.24%
											10.02%

Notes

- [1] Source: Bloomberg. Based on indicated number of days historical average.
- [2] Source: Bloomberg.
- [3] Average of EPS Growth Rates from Value Line, Zacks, and First Call
- [4] Interpolating Growth Rates: Col. [3] - ((Col. [3] - Col. [5]) / 6) \* (Year - 5)
- [5] Long-term GDP Growth Rate
- [6] Calculated ROE

30-DAY MULTI-STAGE DCF -- LOW GROWTH RATE

Inputs		[1]	[2]	[3]	[4]	[4]	[4]	[4]	[4]	[5]	[6]
Company	Ticker	Stock Price	Annualized Dividend	First Stage Growth	Second Stage Growth					Third Stage Growth	ROE
					Year 6	Year 7	Year 8	Year 9	Year 10		
ALLETE, Inc.	ALE	\$49.06	\$1.90	6.00%	5.90%	5.80%	5.70%	5.60%	5.50%	5.40%	9.64%
American Electric Power Company, Inc.	AEP	\$45.10	\$1.96	3.56%	3.87%	4.17%	4.48%	4.79%	5.09%	5.40%	9.48%
Cleco Corporation	CNL	\$45.75	\$1.45	5.50%	5.48%	5.47%	5.45%	5.43%	5.42%	5.40%	8.76%
Empire District Electric Company	EDE	\$22.15	\$1.00	3.00%	3.40%	3.80%	4.20%	4.60%	5.00%	5.40%	9.49%
FirstEnergy Corporation	FE	\$37.56	\$2.20	0.60%	1.40%	2.20%	3.00%	3.80%	4.60%	5.40%	9.98%
Great Plains Energy Inc.	GXP	\$22.71	\$0.87	6.19%	6.06%	5.93%	5.80%	5.66%	5.53%	5.40%	9.64%
Hawaiian Electric Industries, Inc.	HE	\$25.09	\$1.24	2.40%	2.90%	3.40%	3.90%	4.40%	4.90%	5.40%	9.72%
IDACORP, Inc.	IDA	\$48.15	\$1.52	2.00%	2.57%	3.13%	3.70%	4.27%	4.83%	5.40%	8.04%
Otter Tail Corporation	OTTR	\$28.25	\$1.19	6.00%	5.90%	5.80%	5.70%	5.60%	5.50%	5.40%	10.01%
Pinnacle West Capital Corporation	PNW	\$55.72	\$2.18	4.45%	4.61%	4.77%	4.93%	5.08%	5.24%	5.40%	9.28%
Portland General Electric Company	POR	\$30.59	\$1.10	3.50%	3.82%	4.13%	4.45%	4.77%	5.08%	5.40%	8.75%
Southern Company	SO	\$43.98	\$2.03	4.50%	4.65%	4.80%	4.95%	5.10%	5.25%	5.40%	10.00%
Westar Energy, Inc.	WR	\$31.50	\$1.36	3.90%	4.15%	4.40%	4.65%	4.90%	5.15%	5.40%	9.54%
MEAN											9.41%
FLOTATION COST											0.24%
											9.65%

Notes

- [1] Source: Bloomberg. Based on indicated number of days historical average.
- [2] Source: Bloomberg.
- [3] Minimum of EPS Growth Rates from Value Line, Zacks, and First Call
- [4] Interpolating Growth Rates: Col. [3] - ((Col. [3] - Col. [5]) / 6) \* (Year - 5)
- [5] Long-term GDP Growth Rate
- [6] Calculated ROE

90-DAY MULTI-STAGE DCF -- LOW GROWTH RATE

Inputs		[1]	[2]	[3]	[4]	[4]	[4]	[4]	[4]	[5]	[6]
					Second Stage Growth					Third Stage	
Company	Ticker	Stock Price	Annualized Dividend	First Stage Growth	Year 6	Year 7	Year 8	Year 9	Year 10	Growth	ROE
ALLETE, Inc.	ALE	\$49.34	\$1.90	6.00%	5.90%	5.80%	5.70%	5.60%	5.50%	5.40%	9.61%
American Electric Power Company, Inc.	AEP	\$47.65	\$1.96	3.56%	3.87%	4.17%	4.48%	4.79%	5.09%	5.40%	9.26%
Cleco Corporation	CNL	\$46.46	\$1.45	5.50%	5.48%	5.47%	5.45%	5.43%	5.42%	5.40%	8.70%
Empire District Electric Company	EDE	\$22.30	\$1.00	3.00%	3.40%	3.80%	4.20%	4.60%	5.00%	5.40%	9.46%
FirstEnergy Corporation	FE	\$41.38	\$2.20	0.60%	1.40%	2.20%	3.00%	3.80%	4.60%	5.40%	9.54%
Great Plains Energy Inc.	GXP	\$23.14	\$0.87	6.19%	6.06%	5.93%	5.80%	5.66%	5.53%	5.40%	9.56%
Hawaiian Electric Industries, Inc.	HE	\$26.66	\$1.24	2.40%	2.90%	3.40%	3.90%	4.40%	4.90%	5.40%	9.46%
IDACORP, Inc.	IDA	\$48.10	\$1.52	2.00%	2.57%	3.13%	3.70%	4.27%	4.83%	5.40%	8.04%
Otter Tail Corporation	OTTR	\$29.65	\$1.19	6.00%	5.90%	5.80%	5.70%	5.60%	5.50%	5.40%	9.79%
Pinnacle West Capital Corporation	PNW	\$57.67	\$2.18	4.45%	4.61%	4.77%	4.93%	5.08%	5.24%	5.40%	9.15%
Portland General Electric Company	POR	\$30.86	\$1.10	3.50%	3.82%	4.13%	4.45%	4.77%	5.08%	5.40%	8.72%
Southern Company	SO	\$45.72	\$2.03	4.50%	4.65%	4.80%	4.95%	5.10%	5.25%	5.40%	9.82%
Westar Energy, Inc.	WR	\$32.62	\$1.36	3.90%	4.15%	4.40%	4.65%	4.90%	5.15%	5.40%	9.40%
MEAN											9.27%
FLOTATION COST											0.24%
											9.51%

Notes

- [1] Source: Bloomberg. Based on indicated number of days historical average.
- [2] Source: Bloomberg.
- [3] Minimum of EPS Growth Rates from Value Line, Zacks, and First Call
- [4] Interpolating Growth Rates: Col. [3] - ((Col. [3] - Col. [5])/ 6) \* (Year - 5)
- [5] Long-term GDP Growth Rate
- [6] Calculated ROE

180-DAY MULTI-STAGE DCF -- LOW GROWTH RATE

Inputs		[1]	[2]	[3]	[4]	[4]	[4]	[4]	[4]	[5]	[6]
Company	Ticker	Stock Price	Annualized Dividend	First Stage Growth	Second Stage Growth					Third Stage Growth	ROE
					Year 6	Year 7	Year 8	Year 9	Year 10		
ALLETE, Inc.	ALE	\$45.99	\$1.90	6.00%	5.90%	5.80%	5.70%	5.60%	5.50%	5.40%	9.92%
American Electric Power Company, Inc.	AEP	\$45.68	\$1.96	3.56%	3.87%	4.17%	4.48%	4.79%	5.09%	5.40%	9.43%
Cleco Corporation	CNL	\$44.02	\$1.45	5.50%	5.48%	5.47%	5.45%	5.43%	5.42%	5.40%	8.89%
Empire District Electric Company	EDE	\$21.57	\$1.00	3.00%	3.40%	3.80%	4.20%	4.60%	5.00%	5.40%	9.60%
FirstEnergy Corporation	FE	\$41.36	\$2.20	0.60%	1.40%	2.20%	3.00%	3.80%	4.60%	5.40%	9.54%
Great Plains Energy Inc.	GXP	\$22.08	\$0.87	6.19%	6.06%	5.93%	5.80%	5.66%	5.53%	5.40%	9.76%
Hawaiian Electric Industries, Inc.	HE	\$26.25	\$1.24	2.40%	2.90%	3.40%	3.90%	4.40%	4.90%	5.40%	9.52%
IDACORP, Inc.	IDA	\$46.17	\$1.52	2.00%	2.57%	3.13%	3.70%	4.27%	4.83%	5.40%	8.16%
Otter Tail Corporation	OTTR	\$27.63	\$1.19	6.00%	5.90%	5.80%	5.70%	5.60%	5.50%	5.40%	10.11%
Pinnacle West Capital Corporation	PNW	\$55.00	\$2.18	4.45%	4.61%	4.77%	4.93%	5.08%	5.24%	5.40%	9.33%
Portland General Electric Company	POR	\$29.24	\$1.10	3.50%	3.82%	4.13%	4.45%	4.77%	5.08%	5.40%	8.91%
Southern Company	SO	\$44.77	\$2.03	4.50%	4.65%	4.80%	4.95%	5.10%	5.25%	5.40%	9.92%
Westar Energy, Inc.	WR	\$31.01	\$1.36	3.90%	4.15%	4.40%	4.65%	4.90%	5.15%	5.40%	9.61%
MEAN											9.44%
FLOTATION COST											0.24%
											9.68%

Notes

- [1] Source: Bloomberg. Based on indicated number of days historical average.  
 [2] Source: Bloomberg.  
 [3] Minimum of EPS Growth Rates from Value Line, Zacks, and First Call  
 [4] Interpolating Growth Rates: Col. [3] - ((Col. [3] - Col. [5]) / 6) \* (Year - 5)  
 [5] Long-term GDP Growth Rate  
 [6] Calculated ROE

30-DAY MULTI-STAGE DCF -- HIGH GROWTH RATE

Inputs		[1]	[2]	[3]	[4]	[4]	[4]	[4]	[4]	[5]	[6]
Company	Ticker	Stock Price	Annualized Dividend	First Stage Growth	Second Stage Growth					Third Stage Growth	ROE
					Year 6	Year 7	Year 8	Year 9	Year 10		
ALLETE, Inc.	ALE	\$49.06	\$1.90	7.00%	6.73%	6.47%	6.20%	5.93%	5.67%	5.40%	9.90%
American Electric Power Company, Inc.	AEP	\$45.10	\$1.96	4.50%	4.65%	4.80%	4.95%	5.10%	5.25%	5.40%	9.73%
Cleco Corporation	CNL	\$45.75	\$1.45	8.00%	7.57%	7.13%	6.70%	6.27%	5.83%	5.40%	9.33%
Empire District Electric Company	EDE	\$22.15	\$1.00	5.00%	5.07%	5.13%	5.20%	5.27%	5.33%	5.40%	10.04%
FirstEnergy Corporation	FE	\$37.56	\$2.20	3.50%	3.82%	4.13%	4.45%	4.77%	5.08%	5.40%	10.91%
Great Plains Energy Inc.	GXP	\$22.71	\$0.87	6.50%	6.32%	6.13%	5.95%	5.77%	5.58%	5.40%	9.72%
Hawaiian Electric Industries, Inc.	HE	\$25.09	\$1.24	5.50%	5.48%	5.47%	5.45%	5.43%	5.42%	5.40%	10.64%
IDACORP, Inc.	IDA	\$48.15	\$1.52	4.00%	4.23%	4.47%	4.70%	4.93%	5.17%	5.40%	8.43%
Otter Tail Corporation	OTTR	\$28.25	\$1.19	21.50%	18.82%	16.13%	13.45%	10.77%	8.08%	5.40%	15.77%
Pinnacle West Capital Corporation	PNW	\$55.72	\$2.18	5.45%	5.44%	5.43%	5.43%	5.42%	5.41%	5.40%	9.53%
Portland General Electric Company	POR	\$30.59	\$1.10	6.53%	6.34%	6.15%	5.97%	5.78%	5.59%	5.40%	9.47%
Southern Company	SO	\$43.98	\$2.03	4.67%	4.79%	4.91%	5.04%	5.16%	5.28%	5.40%	10.05%
Westar Energy, Inc.	WR	\$31.50	\$1.36	6.00%	5.90%	5.80%	5.70%	5.60%	5.50%	5.40%	10.12%
MEAN											10.28%
FLOTATION COST											0.24%
											10.52%

Notes

- [1] Source: Bloomberg. Based on indicated number of days historical average.
- [2] Source: Bloomberg.
- [3] Maximum of EPS Growth Rates from Value Line, Zacks, and First Call
- [4] Interpolating Growth Rates: Col. [3] - ((Col. [3] - Col. [5]) / 6) \* (Year - 5)
- [5] Long-term GDP Growth Rate
- [6] Calculated ROE

90-DAY MULTI-STAGE DCF – HIGH GROWTH RATE

Inputs		[1]	[2]	[3]	[4]	[4]	[4]	[4]	[4]	[5]	[6]
Company	Ticker	Stock Price	Annualized Dividend	First Stage Growth	Second Stage Growth					Third Stage Growth	ROE
					Year 6	Year 7	Year 8	Year 9	Year 10		
ALLETE, Inc.	ALE	\$49.34	\$1.90	7.00%	6.73%	6.47%	6.20%	5.93%	5.67%	5.40%	9.88%
American Electric Power Company, Inc.	AEP	\$47.65	\$1.96	4.50%	4.65%	4.80%	4.95%	5.10%	5.25%	5.40%	9.50%
Cleco Corporation	CNL	\$46.46	\$1.45	8.00%	7.57%	7.13%	6.70%	6.27%	5.83%	5.40%	9.27%
Empire District Electric Company	EDE	\$22.30	\$1.00	5.00%	5.07%	5.13%	5.20%	5.27%	5.33%	5.40%	10.01%
FirstEnergy Corporation	FE	\$41.38	\$2.20	3.50%	3.82%	4.13%	4.45%	4.77%	5.08%	5.40%	10.39%
Great Plains Energy Inc.	GXP	\$23.14	\$0.87	6.50%	6.32%	6.13%	5.95%	5.77%	5.58%	5.40%	9.64%
Hawaiian Electric Industries, Inc.	HE	\$26.66	\$1.24	5.50%	5.48%	5.47%	5.45%	5.43%	5.42%	5.40%	10.33%
IDACORP, Inc.	IDA	\$48.10	\$1.52	4.00%	4.23%	4.47%	4.70%	4.93%	5.17%	5.40%	8.43%
Otter Tail Corporation	OTTR	\$29.65	\$1.19	21.50%	18.82%	16.13%	13.45%	10.77%	8.08%	5.40%	15.35%
Pinnacle West Capital Corporation	PNW	\$57.67	\$2.18	5.45%	5.44%	5.43%	5.43%	5.42%	5.41%	5.40%	9.39%
Portland General Electric Company	POR	\$30.86	\$1.10	6.53%	6.34%	6.15%	5.97%	5.78%	5.59%	5.40%	9.43%
Southern Company	SO	\$45.72	\$2.03	4.67%	4.79%	4.91%	5.04%	5.16%	5.28%	5.40%	9.87%
Westar Energy, Inc.	WR	\$32.62	\$1.36	6.00%	5.90%	5.80%	5.70%	5.60%	5.50%	5.40%	9.96%
MEAN											10.11%
FLOTATION COST											0.24%
											10.35%

Notes

- [1] Source: Bloomberg. Based on indicated number of days historical average.
- [2] Source: Bloomberg.
- [3] Maximum of EPS Growth Rates from Value Line, Zacks, and First Call
- [4] Interpolating Growth Rates: Col. [3] - ((Col. [3] - Col. [5]) / 6) \* (Year - 5)
- [5] Long-term GDP Growth Rate
- [6] Calculated ROE

180-DAY MULTI-STAGE DCF – HIGH GROWTH RATE

Inputs		[1]	[2]	[3]	[4]	[4]	[4]	[4]	[4]	[5]	[6]
Company	Ticker	Stock Price	Annualized Dividend	First Stage Growth	Second Stage Growth					Third Stage Growth	ROE
					Year 6	Year 7	Year 8	Year 9	Year 10		
ALLETE, Inc.	ALE	\$45.99	\$1.90	7.00%	6.73%	6.47%	6.20%	5.93%	5.67%	5.40%	10.20%
American Electric Power Company, Inc.	AEP	\$45.68	\$1.96	4.50%	4.65%	4.80%	4.95%	5.10%	5.25%	5.40%	9.67%
Cleco Corporation	CNL	\$44.02	\$1.45	8.00%	7.57%	7.13%	6.70%	6.27%	5.83%	5.40%	9.48%
Empire District Electric Company	EDE	\$21.57	\$1.00	5.00%	5.07%	5.13%	5.20%	5.27%	5.33%	5.40%	10.17%
FirstEnergy Corporation	FE	\$41.36	\$2.20	3.50%	3.82%	4.13%	4.45%	4.77%	5.08%	5.40%	10.39%
Great Plains Energy Inc.	GXP	\$22.08	\$0.87	6.50%	6.32%	6.13%	5.95%	5.77%	5.58%	5.40%	9.84%
Hawaiian Electric Industries, Inc.	HE	\$26.25	\$1.24	5.50%	5.48%	5.47%	5.45%	5.43%	5.42%	5.40%	10.41%
IDACORP, Inc.	IDA	\$46.17	\$1.52	4.00%	4.23%	4.47%	4.70%	4.93%	5.17%	5.40%	8.56%
Otter Tail Corporation	OTTR	\$27.63	\$1.19	21.50%	18.82%	16.13%	13.45%	10.77%	8.08%	5.40%	15.96%
Pinnacle West Capital Corporation	PNW	\$55.00	\$2.18	5.45%	5.44%	5.43%	5.43%	5.42%	5.41%	5.40%	9.59%
Portland General Electric Company	POR	\$29.24	\$1.10	6.53%	6.34%	6.15%	5.97%	5.78%	5.59%	5.40%	9.65%
Southern Company	SO	\$44.77	\$2.03	4.67%	4.79%	4.91%	5.04%	5.16%	5.28%	5.40%	9.97%
Westar Energy, Inc.	WR	\$31.01	\$1.36	6.00%	5.90%	5.80%	5.70%	5.60%	5.50%	5.40%	10.20%
MEAN											10.32%
FLOTATION COST											0.24%
FLOTATION COST											10.55%

Notes

- [1] Source: Bloomberg. Based on indicated number of days historical average.
- [2] Source: Bloomberg.
- [3] Maximum of EPS Growth Rates from Value Line, Zacks, and First Call
- [4] Interpolating Growth Rates: Col. [3] - ((Col. [3] - Col. [5]) / 6) \* (Year - 5)
- [5] Long-term GDP Growth Rate
- [6] Calculated ROE

CAPITAL ASSET PRICING MODEL

	[4]	[5]	[6]	[7]
	Risk Free Rate	Average Beta	Market DCF Derived	ROE Estimate
<b><u>PROXY GROUP VALUE LINE BETA</u></b>				
[1] Current 30-day average of the 30-Year Treasury Yield	3.46%	0.712	9.77%	10.41%
[2] Projected 30-Year Treasury (Q3 2013-Q4 2014)	3.73%	0.712	9.49%	10.49%
[3] Projected 30-Year Treasury (2015-2019)	5.20%	0.712	8.03%	10.91%
			Mean	10.60%
<b><u>PROXY GROUP BLOOMBERG BETA</u></b>				
[1] Current 30-day average of the 30-Year Treasury Yield	3.46%	0.727	9.77%	10.56%
[2] Projected 30-Year Treasury (Q3 2013-Q4 2014)	3.73%	0.727	9.49%	10.64%
[3] Projected 30-Year Treasury (2015-2019)	5.20%	0.727	8.03%	11.04%
			Mean	10.74%

Notes:

- [1] Source: Bloomberg
- [2] Source: Aspen Publishers, Blue Chip Financial Forecasts, Vol. 32, No. 7 July 1, 2013, p. 2
- [3] Source: Aspen Publishers, Blue Chip Financial Forecasts, Vol. 32, No. 6 June 1, 2013, p. 14
- [4] See Notes [1], [2], and [3]
- [5] Source: Value Line & Bloomberg
- [6] Source: Rebuttal Exhibit\_\_(AEB-1), Schedule-4.0, p. 2
- [7] Equals Col. [4] + (Col. [5] x Col. [6])

ESTIMATED MARKET RISK PREMIUM DERIVED FROM ANALYSTS LONG-TERM GROWTH ESTIMATES

[1]	[2]	[3]
Estimated Weighted Index Dividend Yield	Weighted Index Long-Term Growth Rate	S&P 500 Est. Required Market Return
2.11%	11.00%	13.23%
		Implied Market Risk
		Risk-Free Rate [4]
		Premium [5]
Current 30-day average Treasury Yield	3.46%	9.77%
Near-Term Projected 30-Year Treasury (Q3 2012-Q4 2013)	3.73%	9.49%
Projected 30-Year Treasury (2015-2019)	5.20%	8.03%
[6] Percent of Index Capitalization Represented by Estimate:		98.39%

STANDARD AND POOR'S 500 INDEX

	[7]	[8]	[9]	[10]	[11]	
Name	Ticker	Weight in Index	Long-Term Growth Est.	Cap-Weighted Long-Term Growth Est.	Estimated Dividend Yield	Cap-Weighted Dividend Yield
3M Co	MMM	0.51%	11.88%	0.06%	2.21%	0.01%
Abbott Laboratories	ABT	0.36%	11.40%	0.04%	1.59%	0.01%
AbbVie Inc	ABBV	0.46%	6.25%	0.03%	3.55%	0.02%
Abercrombie & Fitch Co	ANF	0.03%	16.13%	0.00%	1.57%	0.00%
Accenture PLC	ACN	0.31%	12.75%	0.04%	2.15%	0.01%
ACE Ltd	ACE	0.21%	9.17%	0.02%	2.18%	0.00%
Actavis Inc	ACT	0.11%	11.28%	0.01%	n/a	n/a
Adobe Systems Inc	ADBE	0.16%	11.80%	0.02%	n/a	n/a
ADT Corp/The	ADT	0.06%	9.33%	0.01%	1.16%	0.00%
Advanced Micro Devices Inc	AMD	0.02%	10.75%	0.00%	n/a	n/a
AES Corp/VA	AES	0.06%	7.96%	0.00%	1.27%	0.00%
Aetna Inc	AET	0.16%	10.75%	0.02%	1.26%	0.00%
Aflac Inc	AFL	0.18%	11.75%	0.02%	2.37%	0.00%
Agilent Technologies Inc	A	0.10%	6.73%	0.01%	1.05%	0.00%
AGL Resources Inc	GAS	0.03%	2.94%	0.00%	4.20%	0.00%
Air Products & Chemicals Inc	APD	0.13%	9.33%	0.01%	2.94%	0.00%
Airgas Inc	ARG	0.05%	12.19%	0.01%	1.91%	0.00%
Akamai Technologies Inc	AKAM	0.05%	14.80%	0.01%	n/a	n/a
Alcoa Inc	AA	0.06%	6.50%	0.00%	1.48%	0.00%
Alexion Pharmaceuticals Inc	ALXN	0.14%	23.75%	0.03%	n/a	n/a
Allegheny Technologies Inc	ATI	0.02%	15.00%	0.00%	2.63%	0.00%
Allergan Inc/United States	AGN	0.17%	12.92%	0.02%	0.22%	0.00%
Allstate Corp/The	ALL	0.15%	8.88%	0.01%	1.96%	0.00%
Altera Corp	ALTR	0.07%	12.40%	0.01%	1.71%	0.00%
Altria Group Inc	MO	0.48%	7.59%	0.04%	4.77%	0.02%
Amazon.com Inc	AMZN	0.90%	33.19%	0.30%	n/a	n/a
Ameren Corp	AEE	0.06%	2.00%	0.00%	4.51%	0.00%
American Electric Power Co Inc	AEP	0.15%	4.35%	0.01%	4.21%	0.01%
American Express Co	AXP	0.56%	11.40%	0.06%	1.17%	0.01%
American International Group Inc	AIG	0.45%	10.75%	0.05%	n/a	n/a
American Tower Corp	AMT	0.20%	19.47%	0.04%	1.39%	0.00%
Ameriprise Financial Inc	AMP	0.11%	9.50%	0.01%	2.40%	0.00%
AmerisourceBergen Corp	ABC	0.09%	11.60%	0.01%	1.44%	0.00%
Amgen Inc	AMGN	0.50%	8.52%	0.04%	1.80%	0.01%
Amphenol Corp	APH	0.09%	15.00%	0.01%	0.49%	0.00%
Anadarko Petroleum Corp	APC	0.29%	11.21%	0.03%	0.40%	0.00%
Analog Devices Inc	ADI	0.10%	12.00%	0.01%	2.81%	0.00%
Aon PLC	AON	0.13%	10.00%	0.01%	1.04%	0.00%
Apache Corp	APA	0.21%	7.11%	0.01%	0.97%	0.00%
Apartment Investment & Management C	AIV	0.03%	11.35%	0.00%	3.11%	0.00%
Apple Inc	AAPL	2.58%	20.49%	0.53%	2.86%	0.07%
Applied Materials Inc	AMAT	0.13%	9.67%	0.01%	2.40%	0.00%
Archer-Daniels-Midland Co	ADM	0.15%	10.00%	0.02%	2.09%	0.00%
Assurant Inc	AIZ	0.03%	9.67%	0.00%	1.88%	0.00%
AT&T Inc	T	1.24%	5.43%	0.07%	5.03%	0.06%
Autodesk Inc	ADSK	0.05%	11.60%	0.01%	n/a	n/a
Automatic Data Processing Inc	ADP	0.23%	9.57%	0.02%	2.37%	0.01%
AutoNation Inc	AN	0.04%	22.99%	0.01%	n/a	n/a
AutoZone Inc	AZO	0.10%	15.98%	0.02%	n/a	n/a
AvalonBay Communities Inc	AVB	0.12%	10.10%	0.01%	3.05%	0.00%
Avery Dennison Corp	AVY	0.03%	7.00%	0.00%	2.60%	0.00%
Avon Products Inc	AVP	0.06%	18.75%	0.01%	1.06%	0.00%
Baker Hughes Inc	BHI	0.14%	13.00%	0.02%	1.22%	0.00%
Ball Corp	BLL	0.04%	10.00%	0.00%	1.15%	0.00%
Bank of America Corp	BAC	0.96%	14.50%	0.14%	0.29%	0.00%
Bank of New York Mellon Corp/The	BK	0.23%	12.50%	0.03%	2.00%	0.00%
Baxter International Inc	BAX	0.25%	9.85%	0.02%	2.70%	0.01%
BB&T Corp	BBT	0.16%	9.05%	0.01%	2.64%	0.00%
Beam Inc	BEAM	0.07%	10.85%	0.01%	1.38%	0.00%
Becton Dickinson and Co	BDX	0.13%	8.01%	0.01%	1.94%	0.00%
Bed Bath & Beyond Inc	BBBY	0.11%	13.19%	0.01%	n/a	n/a
Bemis Co Inc	BMS	0.03%	7.00%	0.00%	2.51%	0.00%
Berkshire Hathaway Inc	BRK/B	0.85%	n/a	n/a	n/a	n/a
Best Buy Co Inc	BBY	0.07%	9.70%	0.01%	2.29%	0.00%
Biogen Idec Inc	BIIB	0.35%	18.84%	0.07%	n/a	n/a
BlackRock Inc	BLK	0.29%	13.84%	0.04%	2.49%	0.01%
BMC Software Inc	BMC	0.04%	15.00%	0.01%	n/a	n/a
Boeing Co/The	BA	0.50%	11.50%	0.06%	1.90%	0.01%

Name	Ticker	Weight in Index	Long-Term Growth Est.	Cap-Weighted Long-Term Growth Est.	Estimated Dividend Yield	Cap-Weighted Dividend Yield
BorgWarner Inc	BWA	0.07%	15.00%	0.01%	n/a	n/a
Boston Properties Inc	BXP	0.11%	6.94%	0.01%	2.36%	0.00%
Boston Scientific Corp	BSX	0.08%	9.09%	0.01%	n/a	n/a
Bristol-Myers Squibb Co	BMJ	0.49%	7.61%	0.04%	3.06%	0.01%
Broadcom Corp	BRCM	0.12%	13.75%	0.02%	1.26%	0.00%
Brown-Forman Corp	BF/B	0.06%	12.50%	0.01%	1.41%	0.00%
CA Inc	CA	0.09%	7.50%	0.01%	3.34%	0.00%
Cablevision Systems Corp	CVC	0.03%	17.63%	0.00%	3.19%	0.00%
Cabot Oil & Gas Corp	COG	0.10%	35.00%	0.03%	0.11%	0.00%
Cameron International Corp	CAM	0.10%	17.00%	0.02%	n/a	n/a
Campbell Soup Co	CPB	0.09%	6.20%	0.01%	2.54%	0.00%
Capital One Financial Corp	COF	0.25%	8.50%	0.02%	1.80%	0.00%
Cardinal Health Inc	CAH	0.11%	11.17%	0.01%	2.44%	0.00%
CareFusion Corp	CFN	0.05%	9.93%	0.01%	n/a	n/a
CarMax Inc	KMX	0.07%	13.03%	0.01%	n/a	n/a
Carnival Corp	CCL	0.14%	14.83%	0.02%	2.77%	0.00%
Caterpillar Inc	CAT	0.37%	10.33%	0.04%	2.75%	0.01%
CBRE Group Inc	CBG	0.05%	11.67%	0.01%	n/a	n/a
CBS Corp	CBS	0.20%	10.57%	0.02%	0.91%	0.00%
Celgene Corp	CELG	0.36%	23.62%	0.09%	n/a	n/a
CenterPoint Energy Inc	CNP	0.07%	5.60%	0.00%	3.40%	0.00%
CenturyLink Inc	CTL	0.14%	3.13%	0.00%	5.96%	0.01%
Cerner Corp	CERN	0.11%	18.33%	0.02%	n/a	n/a
CF Industries Holdings Inc	CF	0.07%	9.00%	0.01%	0.87%	0.00%
CH Robinson Worldwide Inc	CHRW	0.06%	14.50%	0.01%	2.42%	0.00%
Charles Schwab Corp/The	SCHW	0.18%	20.45%	0.04%	1.11%	0.00%
Chesapeake Energy Corp	CHK	0.09%	21.88%	0.02%	1.65%	0.00%
Chevron Corp	CVX	1.55%	5.11%	0.08%	3.22%	0.05%
Chipotle Mexican Grill Inc	CMG	0.08%	20.38%	0.02%	n/a	n/a
Chubb Corp/The	CB	0.15%	9.00%	0.01%	2.01%	0.00%
Cigna Corp	CI	0.14%	11.03%	0.02%	0.05%	0.00%
Cincinnati Financial Corp	CINF	0.05%	n/a	n/a	3.31%	0.00%
Cintas Corp	CTAS	0.04%	10.60%	0.00%	1.33%	0.00%
Cisco Systems Inc	CSCO	0.90%	10.57%	0.09%	2.62%	0.02%
Citigroup Inc	C	1.00%	10.83%	0.11%	0.08%	0.00%
Citrix Systems Inc	CTXS	0.08%	14.04%	0.01%	n/a	n/a
Cliffs Natural Resources Inc	CLF	0.02%	5.00%	0.00%	3.56%	0.00%
Clorox Co/The	CLX	0.07%	8.09%	0.01%	3.31%	0.00%
CME Group Inc/IL	CME	0.17%	15.00%	0.03%	2.33%	0.00%
CMS Energy Corp	CMS	0.05%	6.00%	0.00%	3.65%	0.00%
Coach Inc	COH	0.11%	11.44%	0.01%	2.29%	0.00%
Coca-Cola Co/The	KO	1.18%	8.02%	0.09%	2.73%	0.03%
Coca-Cola Enterprises Inc	CCE	0.07%	8.89%	0.01%	2.17%	0.00%
Cognizant Technology Solutions Corp	CTSH	0.14%	18.57%	0.03%	n/a	n/a
Colgate-Palmolive Co	CL	0.36%	9.14%	0.03%	2.30%	0.01%
Comcast Corp	CMCSA	0.61%	17.61%	0.11%	1.75%	0.01%
Comerica Inc	CMA	0.05%	6.64%	0.00%	1.63%	0.00%
Computer Sciences Corp	CSC	0.05%	8.00%	0.00%	1.67%	0.00%
ConAgra Foods Inc	CAG	0.10%	7.00%	0.01%	2.73%	0.00%
ConocoPhillips	COP	0.51%	5.55%	0.03%	4.26%	0.02%
CONSOL Energy Inc	CNX	0.04%	12.00%	0.00%	1.81%	0.00%
Consolidated Edison Inc	ED	0.11%	3.20%	0.00%	4.16%	0.00%
Constellation Brands Inc	STZ	0.06%	13.62%	0.01%	n/a	n/a
Corning Inc	GLW	0.14%	11.50%	0.02%	2.66%	0.00%
Costco Wholesale Corp	COST	0.33%	12.81%	0.04%	1.06%	0.00%
Covidien PLC	COV	0.18%	9.43%	0.02%	1.75%	0.00%
CR Bard Inc	BCR	0.06%	10.70%	0.01%	0.76%	0.00%
Crown Castle International Corp	CCI	0.15%	23.00%	0.03%	n/a	n/a
CSX Corp	CSX	0.16%	12.10%	0.02%	2.46%	0.00%
Cummins Inc	CMI	0.14%	10.33%	0.01%	2.17%	0.00%
CVS Caremark Corp	CVS	0.48%	13.50%	0.07%	1.48%	0.01%
Danaher Corp	DHR	0.30%	13.00%	0.04%	0.15%	0.00%
Darden Restaurants Inc	DRI	0.04%	9.34%	0.00%	4.36%	0.00%
DaVita HealthCare Partners Inc	DVA	0.08%	12.40%	0.01%	n/a	n/a
Deere & Co	DE	0.21%	9.25%	0.02%	2.43%	0.01%
Dell Inc	DELL	0.15%	5.50%	0.01%	2.40%	0.00%
Delphi Automotive PLC	DLPH	0.11%	12.50%	0.01%	1.24%	0.00%
Denbury Resources Inc	DNR	0.04%	n/a	n/a	n/a	n/a
DENTSPLY International Inc	XRAY	0.04%	9.80%	0.00%	0.60%	0.00%
Devon Energy Corp	DVN	0.15%	5.22%	0.01%	1.58%	0.00%
Diamond Offshore Drilling Inc	DO	0.06%	18.00%	0.01%	4.85%	0.00%
DIRECTV	DTV	0.23%	15.95%	0.04%	n/a	n/a
Discover Financial Services	DFS	0.16%	10.50%	0.02%	1.57%	0.00%
Discovery Communications Inc	DISCA	0.08%	18.81%	0.02%	n/a	n/a
Dollar General Corp	DG	0.11%	15.85%	0.02%	n/a	n/a
Dollar Tree Inc	DLTR	0.08%	15.80%	0.01%	n/a	n/a
Dominion Resources Inc/VA	D	0.22%	5.69%	0.01%	3.83%	0.01%
Dover Corp	DOV	0.09%	15.00%	0.01%	1.73%	0.00%
Dow Chemical Co/The	DOW	0.27%	8.76%	0.02%	3.75%	0.01%
DR Horton Inc	DHI	0.05%	5.23%	0.00%	0.66%	0.00%
Dr Pepper Snapple Group Inc	DPS	0.06%	7.18%	0.00%	3.20%	0.00%
DTE Energy Co	DTE	0.08%	4.75%	0.00%	3.80%	0.00%
Duke Energy Corp	DUK	0.32%	4.48%	0.01%	4.45%	0.01%
Dun & Bradstreet Corp/The	DNB	0.03%	n/a	n/a	1.49%	0.00%
E*TRADE Financial Corp	ETFC	0.02%	28.83%	0.01%	n/a	n/a
Eastman Chemical Co	EMN	0.07%	7.67%	0.01%	1.62%	0.00%
Eaton Corp PLC	ETN	0.21%	11.12%	0.02%	2.46%	0.01%
eBay Inc	EBAY	0.48%	14.59%	0.07%	n/a	n/a
Ecolab Inc	ECL	0.17%	13.64%	0.02%	1.02%	0.00%
Edison International	EIX	0.10%	4.84%	0.00%	2.79%	0.00%

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Edwards Lifesciences Corp	EW	0.05%	17.80%	0.01%	n/a	n/a
El du Pont de Nemours & Co	DD	0.32%	7.84%	0.03%	3.31%	0.01%
Electronic Arts Inc	EA	0.05%	16.93%	0.01%	n/a	n/a
Eli Lilly & Co	LLY	0.37%	1.36%	0.01%	3.81%	0.01%
EMC Corp/MA	EMC	0.34%	13.29%	0.04%	1.60%	0.01%
Emerson Electric Co	EMR	0.27%	9.71%	0.03%	2.87%	0.01%
Ensc0 PLC	ESV	0.09%	16.00%	0.01%	3.32%	0.00%
Entergy Corp	ETR	0.08%	-0.49%	0.00%	4.68%	0.00%
EOG Resources Inc	EOG	0.25%	10.97%	0.03%	0.52%	0.00%
EQT Corp	EQT	0.08%	30.00%	0.02%	0.15%	0.00%
Equifax Inc	EFX	0.05%	11.33%	0.01%	1.44%	0.00%
Equity Residential	EQR	0.14%	7.37%	0.01%	2.73%	0.00%
Estee Lauder Cos Inc/The	EL	0.11%	14.18%	0.01%	1.05%	0.00%
Exelon Corp	EXC	0.17%	-0.40%	0.00%	3.99%	0.01%
Expedia Inc	EXPE	0.05%	14.05%	0.01%	0.82%	0.00%
Expeditors International of Washington I	EXPD	0.05%	11.13%	0.01%	1.50%	0.00%
Express Scripts Holding Co	ESRX	0.34%	16.77%	0.06%	n/a	n/a
Exxon Mobil Corp	XOM	2.68%	15.32%	0.41%	2.70%	0.07%
F5 Networks Inc	FFIV	0.04%	14.38%	0.01%	n/a	n/a
Family Dollar Stores Inc	FDO	0.05%	11.55%	0.01%	1.52%	0.00%
Fastenal Co	FAST	0.09%	17.97%	0.02%	2.12%	0.00%
FedEx Corp	FDX	0.21%	12.45%	0.03%	0.59%	0.00%
Fidelity National Information Services Inc	FIS	0.09%	12.40%	0.01%	1.95%	0.00%
Fifth Third Bancorp	FITB	0.11%	12.98%	0.01%	2.53%	0.00%
First Solar Inc	FSLR	0.03%	0.00%	0.00%	n/a	n/a
FirstEnergy Corp	FE	0.10%	4.50%	0.00%	5.87%	0.01%
Fiserv Inc	FISV	0.08%	11.83%	0.01%	n/a	n/a
FLIR Systems Inc	FLIR	0.03%	12.50%	0.00%	1.23%	0.00%
Flowserve Corp	FLS	0.05%	12.33%	0.01%	1.01%	0.00%
Fluor Corp	FLR	0.06%	12.15%	0.01%	1.04%	0.00%
FMC Corp	FMC	0.05%	11.34%	0.01%	0.87%	0.00%
FMC Technologies Inc	FTI	0.09%	15.33%	0.01%	n/a	n/a
Ford Motor Co	F	0.43%	6.18%	0.03%	2.34%	0.01%
Forest Laboratories Inc	FRX	0.08%	34.64%	0.03%	n/a	n/a
Fossil Group Inc	FOSL	0.04%	16.37%	0.01%	n/a	n/a
Franklin Resources Inc	BEN	0.20%	15.10%	0.03%	0.81%	0.00%
Freeport-McMoRan Copper & Gold Inc	FCX	0.19%	7.00%	0.01%	4.46%	0.01%
Frontier Communications Corp	FTR	0.03%	4.03%	0.00%	9.93%	0.00%
GameStop Corp	GME	0.03%	13.88%	0.00%	2.55%	0.00%
Gannett Co Inc	GCI	0.04%	4.50%	0.00%	3.00%	0.00%
Gap Inc/The	GPS	0.14%	12.76%	0.02%	1.33%	0.00%
Garmin Ltd	GRMN	0.05%	6.54%	0.00%	4.96%	0.00%
General Dynamics Corp	GD	0.19%	5.28%	0.01%	2.71%	0.01%
General Electric Co	GE	1.59%	9.75%	0.15%	3.20%	0.05%
General Mills Inc	GIS	0.21%	7.83%	0.02%	2.98%	0.01%
General Motors Co	GM	0.32%	12.50%	0.04%	n/a	n/a
Genuine Parts Co	GPC	0.09%	7.89%	0.01%	2.53%	0.00%
Genworth Financial Inc	GNW	0.04%	5.00%	0.00%	n/a	n/a
Gilead Sciences Inc	GILD	0.57%	25.39%	0.14%	n/a	n/a
Goldman Sachs Group Inc/The	GS	0.47%	10.05%	0.05%	1.25%	0.01%
Goodyear Tire & Rubber Co/The	GT	0.03%	24.02%	0.01%	n/a	n/a
Google Inc	GOOG	1.62%	15.32%	0.25%	n/a	n/a
H&R Block Inc	HRB	0.05%	13.50%	0.01%	2.61%	0.00%
Halliburton Co	HAL	0.27%	14.67%	0.04%	1.12%	0.00%
Harley-Davidson Inc	HOG	0.08%	12.33%	0.01%	1.50%	0.00%
Harman International Industries Inc	HAR	0.02%	17.50%	0.00%	2.17%	0.00%
Harris Corp	HRS	0.04%	2.00%	0.00%	2.86%	0.00%
Hartford Financial Services Group Inc	HIG	0.09%	9.00%	0.01%	1.86%	0.00%
Hasbro Inc	HAS	0.04%	8.00%	0.00%	3.36%	0.00%
HCP Inc	HCP	0.14%	4.53%	0.01%	4.53%	0.01%
Health Care REIT Inc	HCN	0.12%	5.68%	0.01%	4.56%	0.01%
Helmerich & Payne Inc	HP	0.04%	9.00%	0.00%	3.05%	0.00%
Hershey Co/The	HSY	0.10%	8.50%	0.01%	1.83%	0.00%
Hess Corp	HES	0.16%	5.36%	0.01%	0.56%	0.00%
Hewlett-Packard Co	HPQ	0.33%	3.00%	0.01%	2.22%	0.01%
Home Depot Inc/The	HD	0.76%	16.38%	0.12%	1.94%	0.01%
Honeywell International Inc	HON	0.42%	11.16%	0.05%	1.99%	0.01%
Hormel Foods Corp	HRL	0.07%	8.50%	0.01%	1.66%	0.00%
Hospira Inc	HSP	0.04%	10.11%	0.00%	n/a	n/a
Host Hotels & Resorts Inc	HST	0.09%	12.50%	0.01%	2.45%	0.00%
Hudson City Bancorp Inc	HCBK	0.03%	n/a	n/a	1.64%	0.00%
Humana Inc	HUM	0.09%	10.21%	0.01%	1.26%	0.00%
Huntington Bancshares Inc/OH	HBAN	0.05%	5.25%	0.00%	2.40%	0.00%
Illinois Tool Works Inc	ITW	0.21%	9.28%	0.02%	2.11%	0.00%
Ingersoll-Rand PLC	IR	0.11%	10.00%	0.01%	1.42%	0.00%
Integrys Energy Group Inc	TEG	0.03%	5.33%	0.00%	4.50%	0.00%
Intel Corp	INTC	0.77%	9.16%	0.07%	3.77%	0.03%
IntercontinentalExchange Inc	ICE	0.08%	18.00%	0.02%	n/a	n/a
International Business Machines Corp	IBM	1.38%	9.40%	0.13%	1.98%	0.03%
International Flavors & Fragrances Inc	IFF	0.04%	7.33%	0.00%	1.70%	0.00%
International Game Technology	IGT	0.03%	14.25%	0.00%	2.04%	0.00%
International Paper Co	IP	0.14%	5.50%	0.01%	2.49%	0.00%
Interpublic Group of Cos Inc/The	IPG	0.04%	14.50%	0.01%	1.91%	0.00%
Intuit Inc	INTU	0.12%	13.00%	0.02%	1.05%	0.00%
Intuitive Surgical Inc	ISRG	0.11%	15.50%	0.02%	n/a	n/a
Invesco Ltd	IVZ	0.09%	13.75%	0.01%	2.83%	0.00%
Iron Mountain Inc	IRM	0.03%	13.00%	0.00%	3.83%	0.00%
Jabil Circuit Inc	JBL	0.03%	12.00%	0.00%	1.46%	0.00%
Jacobs Engineering Group Inc	JEC	0.05%	13.80%	0.01%	n/a	n/a
JC Penney Co Inc	JCP	0.02%	11.70%	0.00%	n/a	n/a

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JDS Uniphase Corp	JDSU	0.02%	15.00%	0.00%	n/a	n/a
JM Smucker Co/The	SJM	0.07%	8.18%	0.01%	1.96%	0.00%
Johnson & Johnson	JNJ	1.63%	6.46%	0.11%	2.93%	0.05%
Johnson Controls Inc	JCI	0.16%	12.78%	0.02%	2.06%	0.00%
Joy Global Inc	JOY	0.04%	8.10%	0.00%	1.36%	0.00%
JPMorgan Chase & Co	JPM	1.34%	10.13%	0.14%	2.77%	0.04%
Juniper Networks Inc	JNPR	0.07%	14.20%	0.01%	n/a	n/a
Kansas City Southern	KSU	0.08%	17.00%	0.01%	0.76%	0.00%
Kellogg Co	K	0.16%	7.81%	0.01%	2.77%	0.00%
KeyCorp	KEY	0.07%	5.00%	0.00%	1.87%	0.00%
Kimberly-Clark Corp	KMB	0.25%	7.61%	0.02%	3.24%	0.01%
Kimco Realty Corp	KIM	0.06%	5.10%	0.00%	3.76%	0.00%
Kinder Morgan Inc/DE	KMI	0.27%	2.50%	0.01%	3.99%	0.01%
KLA-Tencor Corp	KLAC	0.06%	10.00%	0.01%	2.98%	0.00%
Kohl's Corp	KSS	0.08%	9.14%	0.01%	2.62%	0.00%
Kraft Foods Group Inc	KRFT	0.22%	6.60%	0.01%	3.53%	0.01%
Kroger Co/The	KR	0.13%	8.82%	0.01%	1.59%	0.00%
L Brands Inc	LTD	0.10%	12.13%	0.01%	2.32%	0.00%
L-3 Communications Holdings Inc	LLL	0.05%	3.07%	0.00%	2.44%	0.00%
Laboratory Corp of America Holdings	LH	0.06%	11.25%	0.01%	n/a	n/a
Lam Research Corp	LRCX	0.05%	11.00%	0.01%	n/a	n/a
Legg Mason Inc	LM	0.03%	14.95%	0.00%	1.59%	0.00%
Leggett & Platt Inc	LEG	0.03%	15.00%	0.00%	3.59%	0.00%
Lennar Corp	LEN	0.04%	8.00%	0.00%	0.43%	0.00%
Leucadia National Corp	LUK	0.06%	n/a	n/a	0.93%	0.00%
Life Technologies Corp	LIFE	0.08%	9.53%	0.01%	n/a	n/a
Lincoln National Corp	LNC	0.07%	9.00%	0.01%	1.21%	0.00%
Linear Technology Corp	LLTC	0.06%	10.51%	0.01%	2.61%	0.00%
Lockheed Martin Corp	LMT	0.23%	6.60%	0.02%	4.09%	0.01%
Loews Corp	L	0.11%	n/a	n/a	0.55%	0.00%
Lorillard Inc	LO	0.11%	12.23%	0.01%	4.77%	0.01%
Lowe's Cos Inc	LOW	0.30%	16.26%	0.05%	1.64%	0.00%
LSI Corp	LSI	0.03%	15.33%	0.00%	n/a	n/a
LyondellBasell Industries NV	LYB	0.26%	10.45%	0.03%	2.86%	0.01%
M&T Bank Corp	MTB	0.10%	12.50%	0.01%	2.38%	0.00%
Macerich Co/The	MAC	0.06%	5.23%	0.00%	3.64%	0.00%
Macy's Inc	M	0.12%	9.70%	0.01%	2.02%	0.00%
Marathon Oil Corp	MRO	0.17%	12.67%	0.02%	1.85%	0.00%
Marathon Petroleum Corp	MPC	0.15%	11.00%	0.02%	1.91%	0.00%
Marriott International Inc/DE	MAR	0.08%	15.14%	0.01%	1.63%	0.00%
Marsh & McLennan Cos Inc	MMC	0.15%	12.00%	0.02%	2.40%	0.00%
Masco Corp	MAS	0.05%	8.00%	0.00%	1.45%	0.00%
Mastercard Inc	MA	0.45%	17.91%	0.08%	0.40%	0.00%
Mattel Inc	MAT	0.10%	9.50%	0.01%	3.06%	0.00%
McCormick & Co Inc/MD	MKC	0.06%	8.25%	0.00%	1.90%	0.00%
McDonald's Corp	MCD	0.66%	9.59%	0.06%	3.03%	0.02%
McGraw Hill Financial Inc	MHFI	0.10%	15.60%	0.02%	1.95%	0.00%
McKesson Corp	MCK	0.18%	13.00%	0.02%	0.67%	0.00%
Mead Johnson Nutrition Co	MJN	0.10%	10.80%	0.01%	1.83%	0.00%
MeadWestvaco Corp	MWW	0.04%	10.00%	0.00%	2.77%	0.00%
Medtronic Inc	MDT	0.35%	6.67%	0.02%	2.10%	0.01%
Merck & Co Inc	MRK	0.95%	3.56%	0.03%	3.54%	0.03%
MetLife Inc	MET	0.35%	5.25%	0.02%	2.24%	0.01%
Microchip Technology Inc	MCHP	0.05%	12.00%	0.01%	3.59%	0.00%
Micron Technology Inc	MU	0.09%	12.27%	0.01%	n/a	n/a
Microsoft Corp	MSFT	1.93%	8.50%	0.16%	2.57%	0.05%
Molex Inc	MOLX	0.02%	12.50%	0.00%	3.21%	0.00%
Molson Coors Brewing Co	TAP	0.05%	7.61%	0.00%	2.50%	0.00%
Mondelez International Inc	MDLZ	0.35%	10.63%	0.04%	1.71%	0.01%
Monsanto Co	MON	0.35%	15.05%	0.05%	1.46%	0.01%
Monster Beverage Corp	MNST	0.06%	14.00%	0.01%	n/a	n/a
Moody's Corp	MCO	0.09%	n/a	n/a	1.31%	0.00%
Morgan Stanley	MS	0.33%	6.78%	0.02%	0.77%	0.00%
Mosaic Co/The	MOS	0.11%	6.76%	0.01%	1.78%	0.00%
Motorola Solutions Inc	MSI	0.10%	12.50%	0.01%	1.75%	0.00%
Murphy Oil Corp	MUR	0.08%	13.00%	0.01%	1.94%	0.00%
Mylan Inc/PA	MYL	0.08%	8.87%	0.01%	n/a	n/a
Nabors Industries Ltd	NBR	0.03%	10.00%	0.00%	1.08%	0.00%
NASDAQ OMX Group Inc/The	NDAQ	0.04%	12.63%	0.00%	1.52%	0.00%
National Oilwell Varco Inc	NOV	0.20%	11.33%	0.02%	1.43%	0.00%
NetApp Inc	NTAP	0.09%	13.17%	0.01%	1.53%	0.00%
Netflix Inc	NFLX	0.09%	20.00%	0.02%	n/a	n/a
Newell Rubbermaid Inc	NWL	0.05%	8.83%	0.00%	2.22%	0.00%
Newfield Exploration Co	NFX	0.02%	11.50%	0.00%	n/a	n/a
Newmont Mining Corp	NEM	0.09%	2.00%	0.00%	5.10%	0.00%
News Corp	NWSA	0.04%	10.00%	0.00%	n/a	n/a
NextEra Energy Inc	NEE	0.23%	5.94%	0.01%	3.14%	0.01%
Nielsen Holdings NV	NLSN	0.08%	16.47%	0.01%	1.86%	0.00%
NIKE Inc	NKE	0.29%	11.83%	0.03%	1.32%	0.00%
NiSource Inc	NI	0.06%	4.00%	0.00%	3.30%	0.00%
Noble Corp	NE	0.07%	13.67%	0.01%	1.29%	0.00%
Noble Energy Inc	NBL	0.15%	7.00%	0.01%	0.87%	0.00%
Nordstrom Inc	JWN	0.08%	11.90%	0.01%	1.93%	0.00%
Norfolk Southern Corp	NSC	0.15%	11.60%	0.02%	2.66%	0.00%
Northeast Utilities	NU	0.09%	7.60%	0.01%	3.40%	0.00%
Northern Trust Corp	NTRS	0.10%	14.52%	0.01%	2.02%	0.00%
Northrop Grumman Corp	NOC	0.13%	7.50%	0.01%	2.77%	0.00%
NRG Energy Inc	NRG	0.06%	n/a	n/a	1.68%	0.00%
Nucor Corp	NUE	0.09%	7.33%	0.01%	3.28%	0.00%
NVIDIA Corp	NVDA	0.05%	10.40%	0.01%	2.05%	0.00%

Name	Ticker	Weight in Index	Long-Term Growth Est.	Cap-Weighted Long-Term Growth Est.	Estimated Dividend Yield	Cap-Weighted Dividend Yield
NYSE Euronext	NYSE	0.07%	10.00%	0.01%	2.87%	0.00%
O'Reilly Automotive Inc	ORLY	0.08%	19.20%	0.02%	n/a	n/a
Occidental Petroleum Corp	OXY	0.47%	7.09%	0.03%	2.84%	0.01%
Omnicom Group Inc	OMC	0.11%	7.70%	0.01%	2.41%	0.00%
ONEOK Inc	OKE	0.06%	9.00%	0.01%	3.34%	0.00%
Oracle Corp	ORCL	0.93%	10.89%	0.10%	1.54%	0.01%
Owens-Illinois Inc	OI	0.03%	8.67%	0.00%	n/a	n/a
PACCAR Inc	PCAR	0.13%	10.25%	0.01%	1.41%	0.00%
Pall Corp	PLL	0.05%	11.55%	0.01%	1.42%	0.00%
Parker Hannifin Corp	PH	0.10%	6.20%	0.01%	1.82%	0.00%
Patterson Cos Inc	PDCO	0.03%	9.75%	0.00%	1.61%	0.00%
Paychex Inc	PAYX	0.09%	9.57%	0.01%	3.55%	0.00%
Peabody Energy Corp	BTU	0.03%	12.00%	0.00%	2.13%	0.00%
Pentair Ltd	PNR	0.08%	12.50%	0.01%	1.64%	0.00%
People's United Financial Inc	PBCT	0.03%	6.50%	0.00%	4.28%	0.00%
Pepco Holdings Inc	POM	0.03%	5.17%	0.00%	5.34%	0.00%
PepsiCo Inc	PEP	0.84%	8.22%	0.07%	2.69%	0.02%
PerkinElmer Inc	PKI	0.02%	9.95%	0.00%	0.83%	0.00%
Perrigo Co	PRGO	0.08%	11.61%	0.01%	0.28%	0.00%
PetSmart Inc	PETM	0.05%	15.45%	0.01%	0.92%	0.00%
Pfizer Inc	PFE	1.32%	4.06%	0.05%	3.33%	0.04%
PG&E Corp	PCG	0.13%	5.88%	0.01%	4.00%	0.01%
Philip Morris International Inc	PM	0.95%	9.97%	0.09%	3.79%	0.04%
Phillips 66	PSX	0.24%	10.00%	0.02%	2.12%	0.01%
Pinnacle West Capital Corp	PNW	0.04%	4.69%	0.00%	3.77%	0.00%
Pioneer Natural Resources Co	PXD	0.14%	17.92%	0.02%	0.05%	0.00%
Pitney Bowes Inc	PBI	0.02%	7.00%	0.00%	5.37%	0.00%
Plum Creek Timber Co Inc	PCL	0.05%	5.00%	0.00%	3.63%	0.00%
PNC Financial Services Group Inc/The	PNC	0.26%	4.40%	0.01%	2.35%	0.01%
PPG Industries Inc	PPG	0.15%	8.76%	0.01%	1.55%	0.00%
PPL Corp	PPL	0.12%	-0.57%	0.00%	4.83%	0.01%
Praxair Inc	PX	0.22%	10.64%	0.02%	2.05%	0.00%
Precision Castparts Corp	PCP	0.22%	11.87%	0.03%	0.05%	0.00%
priceline.com Inc	PCLN	0.31%	18.67%	0.06%	n/a	n/a
Principal Financial Group Inc	PFG	0.07%	11.50%	0.01%	2.37%	0.00%
Procter & Gamble Co/The	PG	1.44%	8.64%	0.12%	2.95%	0.04%
Progressive Corp/The	PGR	0.10%	8.25%	0.01%	1.10%	0.00%
Prologis Inc	PLD	0.13%	7.01%	0.01%	2.87%	0.00%
Prudential Financial Inc	PRU	0.23%	10.67%	0.02%	2.05%	0.00%
Public Service Enterprise Group Inc	PEG	0.11%	0.76%	0.00%	4.34%	0.00%
Public Storage	PSA	0.18%	5.67%	0.01%	3.14%	0.01%
PulteGroup Inc	PHM	0.05%	52.20%	0.03%	n/a	n/a
PVH Corp	PVH	0.07%	13.28%	0.01%	0.11%	0.00%
QEP Resources Inc	QEP	0.03%	15.00%	0.01%	0.27%	0.00%
QUALCOMM Inc	QCOM	0.69%	14.19%	0.10%	2.26%	0.02%
Quanta Services Inc	PWR	0.04%	20.63%	0.01%	n/a	n/a
Quest Diagnostics Inc	DGX	0.06%	10.88%	0.01%	2.02%	0.00%
Ralph Lauren Corp	RL	0.07%	12.80%	0.01%	0.88%	0.00%
Range Resources Corp	RRC	0.08%	27.00%	0.02%	0.21%	0.00%
Raytheon Co	RTN	0.15%	9.00%	0.01%	3.17%	0.00%
Red Hat Inc	RHT	0.06%	17.00%	0.01%	n/a	n/a
Regeneron Pharmaceuticals Inc	REGN	0.16%	22.71%	0.04%	n/a	n/a
Regions Financial Corp	RF	0.09%	6.00%	0.01%	1.20%	0.00%
Republic Services Inc	RSG	0.08%	2.30%	0.00%	2.67%	0.00%
Reynolds American Inc	RAI	0.18%	8.01%	0.01%	4.91%	0.01%
Robert Half International Inc	RHI	0.03%	13.33%	0.00%	1.85%	0.00%
Rockwell Automation Inc	ROK	0.08%	12.00%	0.01%	2.29%	0.00%
Rockwell Collins Inc	COL	0.06%	9.45%	0.01%	1.77%	0.00%
Roper Industries Inc	ROP	0.08%	15.00%	0.01%	0.51%	0.00%
Ross Stores Inc	ROST	0.09%	11.56%	0.01%	1.01%	0.00%
Rowan Cos Plc	RDC	0.03%	13.00%	0.00%	n/a	n/a
Ryder System Inc	R	0.02%	9.50%	0.00%	2.24%	0.00%
Safeway Inc	SWY	0.04%	8.41%	0.00%	3.26%	0.00%
SAIC Inc	SAI	0.03%	6.83%	0.00%	3.40%	0.00%
Salesforce.com Inc	CRM	0.16%	29.48%	0.05%	n/a	n/a
SanDisk Corp	SNDK	0.10%	18.50%	0.02%	n/a	n/a
SCANA Corp	SCG	0.05%	5.00%	0.00%	3.98%	0.00%
Schlumberger Ltd	SLB	0.66%	17.00%	0.11%	1.63%	0.01%
Scripps Networks Interactive Inc	SNI	0.05%	12.58%	0.01%	0.83%	0.00%
Seagate Technology PLC	STX	0.11%	6.17%	0.01%	3.25%	0.00%
Sealed Air Corp	SEE	0.03%	5.50%	0.00%	1.89%	0.00%
Sempra Energy	SRE	0.13%	6.75%	0.01%	3.01%	0.00%
Sherwin-Williams Co/The	SHW	0.12%	12.50%	0.02%	1.07%	0.00%
Sigma-Aldrich Corp	SIAL	0.07%	7.24%	0.00%	1.02%	0.00%
Simon Property Group Inc	SPG	0.33%	7.59%	0.02%	2.82%	0.01%
SLM Corp	SLM	0.07%	n/a	n/a	2.56%	0.00%
Snap-on Inc	SNA	0.04%	10.00%	0.00%	1.63%	0.00%
Southern Co/The	SO	0.25%	4.86%	0.01%	4.51%	0.01%
Southwest Airlines Co	LUV	0.06%	18.72%	0.01%	1.19%	0.00%
Southwestern Energy Co	SWN	0.09%	n/a	n/a	n/a	n/a
Spectra Energy Corp	SE	0.15%	5.50%	0.01%	3.43%	0.01%
St Jude Medical Inc	STJ	0.09%	10.21%	0.01%	2.07%	0.00%
Stanley Black & Decker Inc	SWK	0.09%	12.50%	0.01%	2.38%	0.00%
Staples Inc	SPLS	0.07%	8.52%	0.01%	2.87%	0.00%
Starbucks Corp	SBUX	0.34%	18.00%	0.06%	1.20%	0.00%
Starwood Hotels & Resorts Worldwide Ir	HOT	0.08%	13.19%	0.01%	1.87%	0.00%
State Street Corp	STT	0.20%	11.80%	0.02%	1.51%	0.00%
Stercycle Inc	SRCL	0.07%	16.00%	0.01%	n/a	n/a
Stryker Corp	SYK	0.16%	8.34%	0.01%	1.57%	0.00%
SunTrust Banks Inc	STI	0.12%	9.54%	0.01%	1.18%	0.00%

Name	Ticker	Weight in Index	Long-Term Growth Est.	Cap-Weighted Long-Term Growth Est.	Estimated Dividend Yield	Cap-Weighted Dividend Yield
Symantec Corp	SYMC	0.11%	7.00%	0.01%	2.52%	0.00%
Sysco Corp	SY	0.14%	9.00%	0.01%	3.15%	0.00%
T Rowe Price Group Inc	TROW	0.13%	13.76%	0.02%	1.96%	0.00%
Target Corp	TGT	0.30%	11.22%	0.03%	2.37%	0.01%
TE Connectivity Ltd	TEL	0.13%	15.00%	0.02%	2.11%	0.00%
TECO Energy Inc	TE	0.02%	4.50%	0.00%	5.01%	0.00%
Tenet Healthcare Corp	THC	0.03%	10.25%	0.00%	n/a	n/a
Teradata Corp	TDC	0.06%	14.80%	0.01%	n/a	n/a
Teradyne Inc	TER	0.02%	11.75%	0.00%	n/a	n/a
Tesoro Corp	TSO	0.05%	26.32%	0.01%	1.45%	0.00%
Texas Instruments Inc	TXN	0.27%	9.67%	0.03%	2.99%	0.01%
Textron Inc	TXT	0.05%	13.95%	0.01%	0.29%	0.00%
Thermo Fisher Scientific Inc	TMO	0.22%	9.77%	0.02%	0.68%	0.00%
Tiffany & Co	TIF	0.06%	13.05%	0.01%	1.77%	0.00%
Time Warner Cable Inc	TWC	0.22%	11.42%	0.02%	2.26%	0.00%
Time Warner Inc	TWX	0.37%	10.03%	0.04%	1.86%	0.01%
TJX Cos Inc	TJX	0.24%	11.69%	0.03%	1.11%	0.00%
Torchmark Corp	TMK	0.04%	9.00%	0.00%	0.98%	0.00%
Total System Services Inc	TSS	0.03%	11.67%	0.00%	1.56%	0.00%
Travelers Cos Inc/The	TRV	0.20%	5.90%	0.01%	2.38%	0.00%
TripAdvisor Inc	TRIP	0.05%	17.50%	0.01%	n/a	n/a
Twenty-First Century Fox Inc	FOXA	0.30%	14.84%	0.04%	0.56%	0.00%
Tyco International Ltd	TYC	0.11%	11.00%	0.01%	1.82%	0.00%
Tyson Foods Inc	TSN	0.05%	8.50%	0.00%	0.74%	0.00%
Union Pacific Corp	UNP	0.48%	13.80%	0.07%	1.72%	0.01%
United Parcel Service Inc	UPS	0.40%	11.54%	0.05%	2.88%	0.01%
United States Steel Corp	X	0.02%	6.00%	0.00%	1.11%	0.00%
United Technologies Corp	UTX	0.59%	12.86%	0.08%	2.14%	0.01%
UnitedHealth Group Inc	UNH	0.45%	12.17%	0.05%	1.65%	0.01%
Unum Group	UNM	0.05%	9.50%	0.01%	1.84%	0.00%
Urban Outfitters Inc	URBN	0.04%	17.61%	0.01%	n/a	n/a
US Bancorp/MN	USB	0.45%	14.01%	0.06%	2.44%	0.01%
Valero Energy Corp	VLO	0.13%	6.71%	0.01%	2.23%	0.00%
Varian Medical Systems Inc	VAR	0.05%	11.95%	0.01%	n/a	n/a
Ventas Inc	VTR	0.13%	4.61%	0.01%	3.80%	0.01%
VenSign Inc	VRSN	0.04%	12.33%	0.01%	n/a	n/a
Verizon Communications Inc	VZ	0.93%	7.91%	0.07%	4.09%	0.04%
VF Corp	VFC	0.14%	12.00%	0.02%	1.74%	0.00%
Viacom Inc	VIAB	0.20%	11.21%	0.02%	1.67%	0.00%
Visa Inc	V	0.64%	18.88%	0.12%	0.69%	0.00%
Vornado Realty Trust	VNO	0.10%	6.18%	0.01%	3.36%	0.00%
Vulcan Materials Co	VMC	0.04%	8.75%	0.00%	0.08%	0.00%
Wal-Mart Stores Inc	WMT	1.64%	9.20%	0.15%	2.42%	0.04%
Walgreen Co	WAG	0.30%	13.14%	0.04%	2.58%	0.01%
Walt Disney Co/The	DIS	0.78%	11.63%	0.09%	1.12%	0.01%
Washington Post Co/The	WPO	0.02%	n/a	n/a	1.90%	0.00%
Waste Management Inc	WM	0.13%	6.05%	0.01%	3.47%	0.00%
Waters Corp	WAT	0.06%	11.26%	0.01%	n/a	n/a
WeillPoint Inc	WLP	0.17%	11.00%	0.02%	1.76%	0.00%
Wells Fargo & Co	WFC	1.46%	9.32%	0.14%	2.81%	0.04%
Western Digital Corp	WDC	0.10%	5.00%	0.01%	1.47%	0.00%
Western Union Co/The	WU	0.06%	11.14%	0.01%	2.86%	0.00%
Weyerhaeuser Co	WY	0.11%	5.50%	0.01%	2.98%	0.00%
Whirlpool Corp	WHR	0.06%	26.04%	0.02%	2.03%	0.00%
Whole Foods Market Inc	WFM	0.13%	17.62%	0.02%	0.71%	0.00%
Williams Cos Inc/The	WMB	0.15%	6.25%	0.01%	4.17%	0.01%
Windstream Corp	WIN	0.03%	-3.12%	0.00%	12.27%	0.00%
Wisconsin Energy Corp	WEC	0.06%	4.67%	0.00%	3.20%	0.00%
WPX Energy Inc	WPX	0.03%	n/a	n/a	n/a	n/a
WW Grainger Inc	GWV	0.12%	15.00%	0.02%	1.40%	0.00%
Wyndham Worldwide Corp	WYN	0.05%	19.70%	0.01%	1.93%	0.00%
Wynn Resorts Ltd	WYNN	0.09%	9.00%	0.01%	3.06%	0.00%
Xcel Energy Inc	XEL	0.09%	4.80%	0.00%	3.82%	0.00%
Xerox Corp	XR	0.08%	n/a	n/a	2.34%	0.00%
Xilinx Inc	XLNX	0.07%	12.75%	0.01%	2.33%	0.00%
XL Group PLC	XL	0.06%	10.00%	0.01%	1.75%	0.00%
Xylem Inc/NY	XYL	0.03%	7.70%	0.00%	1.60%	0.00%
Yahoo! Inc	YHOO	0.19%	9.16%	0.02%	n/a	n/a
Yum! Brands Inc	YUM	0.21%	12.16%	0.02%	1.90%	0.00%
Zimmer Holdings Inc	ZMH	0.09%	10.57%	0.01%	1.01%	0.00%
Zions Bancorporation	ZION	0.04%	7.75%	0.00%	0.53%	0.00%
Zoetis Inc	ZTS	0.10%	12.85%	0.01%	0.83%	0.00%

Notes:

- [1] Equals sum of Col. [11]
- [2] Equals sum of Col. [9]
- [3] Equals Col. [1] x (1 + (0.5 x (Col. [2]))) + Col. [2]
- [4] Source: Bloomberg and Blue Chip Financial Forecasts
- [5] Equals Col. [3] - Col. [4]
- [6] Equals sum of Col. [7] if Col. [8] ≠ n/a
- [7] Equals weight in S&P 500 based on market capitalization
- [8] Source: Bloomberg
- [9] Equals Col. [7] x Col. [8] if Col. [8] ≠ n/a, otherwise equals zero
- [10] Source: Bloomberg
- [11] Equals Col. [7] x Col. [10] if Col. [8] ≠ n/a, otherwise equals zero

BETAS  
VALUE LINE AND BLOOMBERG

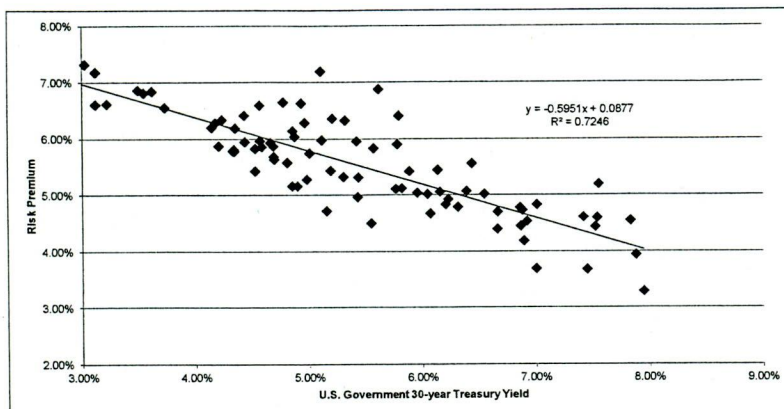
Case No. PU-12-813  
Exhibit\_\_(AEB-2), Schedule 4.1  
Page 1 of 1

		<u>Value Line</u>	<u>Bloomberg</u>	<u>Average</u>
ALLETE, Inc.	ALE	0.70	0.80	0.75
American Electric Power Company, Inc.	AEP	0.65	0.63	0.64
Cleco Corporation	CNL	0.65	0.77	0.71
Empire District Electric Company	EDE	0.65	0.75	0.70
FirstEnergy Corporation	FE	0.75	0.66	0.70
Great Plains Energy Inc.	GXP	0.80	0.79	0.80
Hawaiian Electric Industries, Inc.	HE	0.70	0.72	0.71
IDACORP, Inc.	IDA	0.70	0.84	0.77
Otter Tail Corporation	OTTR	0.90	0.78	0.84
Pinnacle West Capital Corporation	PNW	0.70	0.74	0.72
Portland General Electric Company	POR	0.75	0.78	0.76
Southern Company	SO	0.55	0.52	0.53
Westar Energy, Inc.	WR	0.75	0.68	0.72
Average Beta		<u>0.712</u>	<u>0.727</u>	<u>0.719</u>

Sources: Value Line and Bloomberg

Bond Yield Risk Premium

	[1]	[2]	[3]
	Average Authorized Electric ROE	U.S. Govt. 30-year Treasury	Risk Premium
1992.1	12.38%	7.84%	4.55%
1992.2	11.83%	7.88%	3.94%
1992.3	12.03%	7.42%	4.62%
1992.4	12.14%	7.54%	4.60%
1993.1	11.84%	7.01%	4.83%
1993.2	11.64%	6.86%	4.78%
1993.3	11.15%	6.23%	4.92%
1993.4	11.04%	6.21%	4.84%
1994.1	11.07%	6.66%	4.40%
1994.2	11.13%	7.45%	3.68%
1994.3	12.75%	7.55%	5.20%
1994.4	11.24%	7.95%	3.29%
1995.1	11.96%	7.52%	4.44%
1995.2	11.32%	6.87%	4.45%
1995.3	11.37%	6.66%	4.71%
1995.4	11.58%	6.14%	5.45%
1996.1	11.46%	6.39%	5.07%
1996.2	11.46%	6.92%	4.54%
1996.3	10.70%	7.00%	3.70%
1996.4	11.56%	6.54%	5.02%
1997.1	11.08%	6.90%	4.18%
1997.2	11.62%	6.88%	4.73%
1997.3	12.00%	6.44%	5.56%
1997.4	11.06%	6.04%	5.02%
1998.1	11.31%	5.89%	5.43%
1998.2	12.20%	5.79%	6.41%
1998.3	11.65%	5.32%	6.33%
1998.4	12.30%	5.11%	7.20%
1999.1	10.40%	5.43%	4.97%
1999.2	10.94%	5.82%	5.12%
1999.3	10.75%	6.07%	4.68%
1999.4	11.10%	6.31%	4.79%
2000.1	11.21%	6.15%	5.06%
2000.2	11.00%	5.95%	5.05%
2000.3	11.68%	5.78%	5.90%
2000.4	12.50%	5.62%	6.88%
2001.1	11.38%	5.42%	5.96%
2001.2	10.88%	5.77%	5.11%
2001.3	10.76%	5.44%	5.32%
2001.4	11.57%	5.21%	6.36%
2002.1	10.05%	5.55%	4.50%
2002.2	11.41%	5.57%	5.83%
2002.3	11.25%	4.96%	6.29%
2002.4	11.57%	4.93%	6.63%
2003.1	11.43%	4.78%	6.65%
2003.2	11.16%	4.57%	6.60%
2003.3	9.88%	5.15%	4.72%
2003.4	11.09%	5.11%	5.98%
2004.1	11.00%	4.86%	6.14%
2004.2	10.64%	5.31%	5.33%
2004.3	10.75%	5.01%	5.74%
2004.4	10.91%	4.87%	6.04%
2005.1	10.56%	4.69%	5.87%
2005.2	10.13%	4.34%	5.78%
2005.3	10.85%	4.43%	6.41%
2005.4	10.59%	4.66%	5.93%
2006.1	10.38%	4.69%	5.69%
2006.2	10.63%	5.19%	5.44%
2006.3	10.06%	4.90%	5.16%
2006.4	10.33%	4.70%	5.64%
2007.1	10.39%	4.81%	5.58%
2007.2	10.27%	4.98%	5.28%
2007.3	10.02%	4.85%	5.16%
2007.4	10.36%	4.53%	5.83%
2008.1	10.15%	4.34%	5.81%
2008.2	10.54%	4.57%	5.97%
2008.3	10.38%	4.44%	5.95%
2008.4	10.36%	3.49%	6.86%
2009.1	10.46%	3.62%	6.85%
2009.2	10.58%	4.23%	6.34%
2009.3	10.46%	4.18%	6.28%
2009.4	10.54%	4.35%	6.19%
2010.1	10.45%	4.59%	5.86%
2010.2	10.08%	4.20%	5.87%
2010.3	10.29%	3.73%	6.56%
2010.4	10.34%	4.14%	6.20%
2011.1	9.96%	4.53%	5.44%
2011.2	10.12%	4.33%	5.79%
2011.3	10.36%	3.54%	6.82%
2011.4	10.34%	3.03%	7.32%
2012.1	10.30%	3.12%	7.18%
2012.2	9.92%	2.84%	7.08%
2012.3	9.78%	2.68%	7.10%
2012.4	10.05%	2.87%	7.18%
2013.1	9.73%	3.12%	6.61%
2013.2	9.84%	3.22%	6.62%
MEAN	10.93%	5.33%	5.60%



SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.851
R Square	0.725
Adjusted R Square	0.721
Standard Error	0.005
Observations	86

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	0.0051	0.0051	221.0291	0.0000
Residual	84	0.0019	0.0000		
Total	85	0.0070			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	0.088	0.0022	39.93	0.0000	0.0833	0.0921	0.0833	0.0921
U.S. Govt. 30-year Treasury	-0.595	0.0400	-14.87	0.0000	-0.6747	-0.5155	-0.6747	-0.5155

	[7]	[8]	[9]
	U.S. Govt. 30-year Treasury	Risk Premium	Authorized ROE
Current 30-Day Average [4]	3.46%	6.71%	10.17%
Blue Chip Consensus Forecast (Q3 2013-Q4 2014) [5]	3.73%	6.55%	10.28%
Blue Chip Consensus Forecast (2015-2019) [6]	5.20%	5.67%	10.87%
AVERAGE			10.44%

Notes:

- [1] Source: Regulatory Research Associates, accessed July 22, 2013
- [2] Source: Bloomberg Professional, quarterly bond yields are the average of the last trading day of each month in the quarter
- [3] Equals Column [1] - Column [2]
- [4] Source: Bloomberg Professional
- [5] Source: Blue Chip Financial Forecasts, Vol. 32, No. 7, July 1, 2013, at 2
- [6] Source: Blue Chip Financial Forecasts, Vol. 32, No. 6, June 1, 2013, at 14
- [7] See notes [4], [5] & [6]
- [8] Equals  $0.087684 + (-0.595141 \times \text{Column [7]})$
- [9] Equals Column [7] + Column [8]

CHARLES W. KING METHODOLOGY  
 NORTHERN STATES POWER COMPANY  
 ADJUSTED EQUITY RETURN DETERMINATION

Methodology	Source [1]	Indication	Weighting [2]	Weighting Indication [3]	Composite Indication
Constant Growth DCF					
Mean	Schedule 7	9.22%			
Median	Schedule 7	9.21%			
Average		9.22%	5	46.08%	
3-Step DCF	Schedule 8	8.55%	0	0.00%	
Sustainable Growth DCF					
Mean	Schedule 9	8.58%			
Median	Schedule 9	8.59%			
Average		8.58%	0	0.00%	
CAPM	Schedule 11	9.63%	2	19.26%	
Risk Premium	Schedule 5	10.44%	3	31.32%	
Recent ROE Awards	Schedule 13	10.04%	2	20.08%	
Total			12	116.75%	9.73%
Flotation Cost	Schedule 2				0.24%
Adjusted Total					9.97%

Notes:

[1] Source: Exhibit\_(AEB-2), schedule noted above.

[2] Source: Exhibit CWK-2, Schedule-9

[3] Source: Charles W. King weighting methodology (Exhibit CWK-2, Schedule-9)

CORRECTION TO CHARLES W. KING METHODOLOGY  
 60-DAY CONSTANT GROWTH DCF

Company Name	Ticker	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
		Div'd Decl'd per Share 2013	Div'd Decl'd per Share 2014	Div'd Decl'd per Share Average	Stock Price	Dividend Yield	Value Line Earnings Growth	Zacks Earnings Growth	Yahoo! Finance Earnings Growth	Average Growth Rate	ROE	Adjusted ROE
ALLETE, Inc.	ALE	\$1.90	\$1.96	\$1.93	\$49.33	3.91%	7.00%	7.00%	6.00%	6.67%	10.58%	10.58%
Alliant Energy Corporation	LNT	\$1.88	\$1.96	\$1.92	\$50.68	3.79%	5.00%	6.00%	5.93%	5.64%	9.43%	9.43%
Cleco Corporation	CNL	\$1.43	\$1.58	\$1.51	\$46.44	3.24%	5.50%	8.00%	8.00%	7.17%	10.41%	10.41%
Duke Energy Corporation	DUK	\$3.09	\$3.15	\$3.12	\$69.43	4.49%	4.00%	5.00%	4.17%	4.39%	8.88%	8.88%
El Paso Electric	EE	\$1.06	\$1.14	\$1.10	\$36.43	3.02%	3.00%	-1.00%	3.70%	1.90%	4.92%	
Empire District Electric Company	EDE	\$1.00	\$1.00	\$1.00	\$22.15	4.51%	5.00%	3.00%	3.00%	3.67%	8.18%	8.18%
Great Plains Energy Inc.	GXP	\$0.88	\$0.96	\$0.92	\$23.13	3.98%	6.50%	5.00%	6.26%	5.92%	9.90%	9.90%
IDACORP, Inc.	IDA	\$1.56	\$1.68	\$1.62	\$48.13	3.37%	2.00%	4.00%	4.00%	3.33%	6.70%	
NorthWestern Corporation	NWE	\$1.52	\$1.56	\$1.54	\$40.97	3.76%	3.00%	5.00%	5.00%	4.33%	8.09%	8.09%
PG&E Corporation	PCG	\$1.82	\$1.82	\$1.82	\$45.46	4.00%	4.00%	2.00%	3.12%	3.04%	7.04%	
Pinnacle West Capital Corporation [12]	PNW	\$2.21	\$2.28	\$2.25	\$57.85	3.88%	5.00%	5.00%	6.00%	5.33%	9.21%	9.21%
Portland General Electric Company	POR	\$1.11	\$1.15	\$1.13	\$30.97	3.65%	3.50%	7.00%	5.69%	5.40%	9.05%	9.05%
Southern Company	SO	\$2.01	\$2.08	\$2.05	\$45.26	4.52%	4.50%	5.00%	4.84%	4.78%	9.30%	9.30%
Westar Energy, Inc.	WR	\$1.36	\$1.40	\$1.38	\$32.32	4.27%	6.00%	5.00%	4.83%	5.28%	9.55%	9.55%
Wisconsin Energy Corporation	WEC	\$1.36	\$1.52	\$1.44	\$42.05	3.42%	5.50%	5.00%	4.93%	5.14%	8.57%	8.57%
Xcel Energy Inc.	XEL	\$1.11	\$1.15	\$1.13	\$29.42	3.84%	4.50%	5.00%	5.09%	4.86%	8.70%	8.70%
	MEAN					3.85%	4.63%	4.75%	5.04%	4.80%	8.66%	9.22%
	MEDIAN					3.86%	4.75%	5.00%	4.97%	5.00%	8.96%	9.21%

Notes:

[1] Source: Value Line (Exhibit CWK-2, Schedule-2)

[2] Source: Value Line (Exhibit CWK-2, Schedule-2)

[3] Equals Average ([1], [2])

[4] Source: Yahoo! Finance, equals 60-day average as of June 25, 2013 (Exhibit CWK-2, Schedule-2)

[5] Equals [3] / [4]

[6] Source: Value Line (Exhibit CWK-2, Schedule-2)

[7] Source: Zacks (Exhibit CWK-2, Schedule-2)

[8] Source: Yahoo! Finance (Exhibit CWK-2, Schedule-2)

[9] Equals Average ([6], [7], [8])

[10] Equals [5] + [9]

[11] Equals [5] + [9] if [10] ≥ 7.23%

[12] Adjusted to include an additional dividend of \$0.55 per share. The Value Line projection for 2013 only includes 3 dividend payments because 5 dividend payments were paid out in 2012.

RECREATION/CORRECTION TO CHARLES W. KING METHODOLOGY  
 60-DAY MULTI-STAGE DCF

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
Company	Ticker	Stock Price	Div'd Decl'd per Share 2013	Div'd Decl'd per Share 2014	Div'd Decl'd per Share Average	Dividend Yield	First Stage Growth	Second Stage Growth	Third Stage Growth	Total Growth	ROE	Adjusted ROE
ALLETE, Inc.	ALE	\$49.33	\$1.90	\$1.96	\$1.93	3.91%	3.50%	5.55%	4.43%	4.49%	8.41%	8.41%
Alliant Energy Corporation	LNT	\$50.68	\$1.88	\$1.96	\$1.92	3.79%	4.50%	5.04%	4.43%	4.66%	8.44%	8.44%
Cleco Corporation	CNL	\$46.44	\$1.43	\$1.58	\$1.51	3.24%	10.00%	5.80%	4.43%	6.74%	9.98%	9.98%
Duke Energy Corporation	DUK	\$69.43	\$3.09	\$3.15	\$3.12	4.49%	2.00%	4.41%	4.43%	3.61%	8.11%	8.11%
El Paso Electric	EE	\$36.43	\$1.06	\$1.14	\$1.10	3.02%	NMF	3.17%	4.43%	3.80%	6.82%	
Empire District Electric Company	EDE	\$22.15	\$1.00	\$1.00	\$1.00	4.51%	3.50%	4.05%	4.43%	3.99%	8.51%	8.51%
Great Plains Energy Inc.	GXP	\$23.13	\$0.88	\$0.96	\$0.92	3.98%	6.00%	5.18%	4.43%	5.20%	9.18%	9.18%
IDACORP, Inc.	IDA	\$48.13	\$1.56	\$1.68	\$1.62	3.37%	7.00%	3.88%	4.43%	5.10%	8.47%	8.47%
NorthWestern Corporation	NWE	\$40.97	\$1.52	\$1.56	\$1.54	3.76%	4.00%	4.38%	4.43%	4.27%	8.03%	8.03%
PG&E Corporation	PCG	\$45.46	\$1.82	\$1.82	\$1.82	4.00%	2.50%	3.74%	4.43%	3.56%	7.56%	7.56%
Pinnacle West Capital Corporation [12]	PNW	\$57.85	\$2.21	\$2.28	\$2.25	3.88%	2.00%	4.88%	4.43%	3.77%	7.65%	7.65%
Portland General Electric Company	POR	\$30.97	\$1.11	\$1.15	\$1.13	3.65%	3.50%	4.91%	4.43%	4.28%	7.93%	7.93%
Southern Company	SO	\$45.26	\$2.01	\$2.08	\$2.05	4.52%	3.50%	4.61%	4.43%	4.18%	8.70%	8.70%
Westar Energy, Inc.	WR	\$32.32	\$1.36	\$1.40	\$1.38	4.27%	3.00%	4.85%	4.43%	4.09%	8.36%	8.36%
Wisconsin Energy Corporation	WEC	\$42.05	\$1.36	\$1.52	\$1.44	3.42%	12.00%	4.79%	4.43%	7.07%	10.50%	10.50%
Xcel Energy Inc.	XEL	\$29.42	\$1.11	\$1.15	\$1.13	3.84%	4.50%	4.65%	4.43%	4.53%	8.37%	8.37%
MEAN						3.85%	4.77%	4.62%	4.43%	4.58%	8.44%	8.55%
EXHIBIT CWK-2 SCHEDULE 3						3.85%	4.77%	4.62%	4.43%	4.60%	8.46%	8.46%

Notes

[1] Source: Yahoo! Finance, equals 60-day average as of June 25, 2013 (Exhibit CWK-2, Schedule-2)

[2] Source: Value Line (Exhibit CWK-2, Schedule-2)

[3] Source: Value Line (Exhibit CWK-2, Schedule-2)

[4] Equals Average ([2], [3])

[5] Equals [4] / [1]

[6] Source: Value Line (Exhibit CWK-2, Schedule-3)

[7] Equals Average ([8], Rebuttal Exhibit\_(AEB-1), Schedule-7, col. [9])

[8] Source: Congressional Budget Office and Social Security Administration (Exhibit CWK-2, Schedule-3)

[9] Equals Average ([6], [7], [8])

[10] Equals [5] + [9]

[11] Equals [5] + [9] if [10] ≥ 7.23%

[12] Adjusted to include an additional dividend of \$0.55 per share. The Value Line projection for 2013 only includes 3 dividend payments because 5 dividend payments were paid out in 2012.

CHARLES W. KING METHODOLOGY  
 SUSTAINABLE BOOK VALUE GROWTH DCF FORMULATION  
 BASED ON 2013 VALUE LINE DATA

Company	Ticker	[1] Earnings per Share 2013	[2] Dividend per Share 2013	[3] Earnings Retention "b"	[4] Book Value per Share 2013	[5] 2013 Return on Book Value "r"	[6] % Retained Return "b x r"	[7] "s x v" Factor	[8] Sustainable Growth	[9] Dividend Yield	[10] ROE	[11] Adjusted ROE
ALLETE, Inc.	ALE	2.75	1.90	30.91%	31.60	8.70%	2.69%	2.99%	5.68%	3.91%	9.59%	9.59%
Alliant Energy Corporation	LNT	3.30	1.88	43.03%	29.00	11.38%	4.90%	0.68%	5.58%	3.79%	9.37%	9.37%
Cleco Corporation	CNL	2.50	1.43	42.80%	25.85	9.67%	4.14%	0.18%	4.32%	3.24%	7.56%	7.56%
Duke Energy Corporation	DUK	4.05	3.09	23.70%	58.90	6.88%	1.63%	0.05%	1.68%	4.49%	6.17%	
El Paso Electric Company	EE	2.35	1.06	54.89%	21.80	10.78%	5.92%	0.15%	6.07%	3.02%	9.09%	9.09%
Empire District Electric Company	EDE	1.40	1.00	28.57%	17.25	8.12%	2.32%	0.35%	2.67%	4.51%	7.18%	
Great Plains Energy Inc.	GXP	1.60	0.88	45.00%	22.40	7.14%	3.21%	0.01%	3.22%	3.98%	7.20%	
IDACORP, Inc.	IDA	3.30	1.56	52.73%	36.55	9.03%	4.76%	0.21%	4.98%	3.37%	8.34%	8.34%
NorthWestern Corporation	NWE	2.45	1.52	37.96%	26.40	9.28%	3.52%	1.30%	4.83%	3.76%	8.59%	8.59%
PG&E Corporation	PCG	1.95	1.82	6.67%	31.30	6.23%	0.42%	2.55%	2.97%	4.00%	6.97%	
Pinnacle West Capital Corporation [13]	PNW	3.50	2.21	36.86%	37.25	9.40%	3.46%	0.63%	4.10%	3.88%	7.98%	7.98%
Portland General Electric Company	POR	1.90	1.11	41.58%	23.60	8.05%	3.35%	0.08%	3.43%	3.65%	7.07%	
Southern Company	SO	2.70	2.01	25.56%	21.35	12.65%	3.23%	0.29%	3.52%	4.52%	8.04%	8.04%
Westar Energy, Inc.	WR	2.25	1.36	39.56%	25.00	9.00%	3.56%	0.35%	3.91%	4.27%	8.18%	8.18%
Wisconsin Energy Corporation	WEC	2.40	1.36	43.33%	18.70	12.83%	5.56%	-0.29%	5.27%	3.42%	8.69%	8.69%
Xcel Energy Inc.	XEL	1.90	1.11	41.58%	19.20	9.90%	4.11%	0.99%	5.10%	3.84%	8.94%	8.94%
	MEAN								4.21%	3.85%	8.06%	8.58%
	MEDIAN								4.21%	3.86%	8.11%	8.59%

Notes

[1] Source: Value Line

[2] Source: Value Line

[3] Equals  $1 - ([2] / [1])$

[4] Source: Value Line

[5] Equals  $[1] / [4]$

[6] Equals  $[3] \times [5]$

[7] Source: Exhibit\_\_(AEB-2), Schedule-9, p. 2, col. [7]

[8] Equals  $[6] + [7]$

[9] Equals Average ( $[2]$ , Exhibit\_\_(AEB-2), Schedule-7, col. [2]) / Exhibit\_\_(AEB-2), Schedule-9, p. 2, col. [1]

[10] Equals  $[8] + [9]$

[11] Equals  $[8] + [9]$  if  $[10] \geq 7.23\%$

[12] Adjusted to include an additional dividend of \$0.55 per share. The Value Line projection for 2013 only includes 3 dividend payments because 5 dividend payments were paid out in 2012.

CHARLES W. KING METHODOLOGY  
 SUSTAINABLE BOOK VALUE GROWTH DCF FORMULATION  
 CALCULATION OF "s x v"

		[1]	[2]	[3]	[4]	[5]	[6]	[7]
Company	Ticker	Stock Price	Book Value 2013	Market/Book Ratio	Shares Outstanding 2012 (millions)	Shares Outstanding 2013 (millions)	Shares Out. Annual % Increase	"s x v" Factor
ALLETE, Inc.	ALE	49.33	31.60	1.56	39.40	41.50	5.33%	2.99%
Alliant Energy Corporation	LNT	50.68	29.00	1.75	110.99	112.00	0.91%	0.68%
Cleco Corporation	CNL	46.44	25.85	1.80	60.36	60.50	0.23%	0.18%
Duke Energy Corporation	DUK	69.43	58.90	1.18	704.00	706.00	0.28%	0.05%
El Paso Electric Company	EE	36.43	21.80	1.67	40.11	40.20	0.22%	0.15%
Empire District Electric Company	EDE	22.15	17.25	1.28	42.48	43.00	1.22%	0.35%
Great Plains Energy Inc.	GXP	23.13	22.40	1.03	153.53	154.00	0.31%	0.01%
IDACORP, Inc.	IDA	48.13	36.55	1.32	50.16	50.50	0.68%	0.21%
NorthWestern Corporation	NWE	40.97	26.40	1.55	37.22	38.10	2.36%	1.30%
PG&E Corporation	PCG	45.46	31.30	1.45	430.72	455.00	5.64%	2.55%
Pinnacle West Capital Corporation	PNW	57.85	37.25	1.55	109.74	111.00	1.15%	0.63%
Portland General Electric Company	POR	30.97	23.60	1.31	75.56	75.75	0.25%	0.08%
Southern Company	SO	45.26	21.35	2.12	867.77	870.00	0.26%	0.29%
Westar Energy, Inc.	WR	32.32	25.00	1.29	126.50	128.00	1.19%	0.35%
Wisconsin Energy Corporation	WEC	42.05	18.70	2.25	229.04	228.50	-0.24%	-0.29%
Xcel Energy Inc.	XEL	29.42	19.20	1.53	487.96	497.00	1.85%	0.99%

Notes

[1] Source: Yahoo! Finance, equals 60-day average as of June 25, 2013 (Exhibit CWK-2, Schedule-4, p. 2)

[2] Value Line

[3] Equals [1] / [2]

[4] Value Line

[5] Value Line

[6] Equals ([5] / [4]) - 1

[7] Equals ([3] - 1) x [6]

PROXY GROUP OF CHARLES W. KING  
 VALUE LINE PROJECTED RETURN ON BOOK EQUITY

Company	Ticker	Value Line Report Date	Return on Shr. Equity 2016 - 2018
ALLETE, Inc.	ALE	6/21/2013	9.50%
Alliant Energy Corporation	LNT	6/21/2013	10.50%
Cleco Corporation	CNL	6/21/2013	11.00%
Duke Energy Corporation	DUK	5/24/2013	8.00%
El Paso Electric Company	EE	5/3/2013	10.50%
Empire District Electric Company	EDE	6/21/2013	8.50%
Great Plains Energy Inc.	GXP	6/21/2013	8.00%
IDACORP, Inc.	IDA	5/3/2013	8.50%
NorthWestern Corporation	NWE	5/3/2013	9.50%
PG&E Corporation	PCG	5/3/2013	9.00%
Pinnacle West Capital Corporation	PNW	5/3/2013	10.00%
Portland General Electric Company	POR	5/3/2013	8.00%
Southern Company	SO	5/24/2013	12.50%
Westar Energy, Inc.	WR	6/21/2013	9.50%
Wisconsin Energy Corporation	WEC	6/21/2013	14.00%
Xcel Energy Inc.	XEL	5/3/2013	10.00%
	MEAN		9.81%

CHARLES W. KING METHODOLOGY  
CAPITAL ASSET PRICING MODEL  
USING PROJECTED TREASURY YIELDS

[1] Projected 30-Year Treasury (2015-2019)	5.20%
Market Return	
[2] Historical 1929-2010	11.88%
[3] Prospective Appreciation Potential 3-5 years	45.00%
[4] Prospective Appreciation Potential Annualized @ 4 yrs	9.73%
[5] Median of Estimated Dividend Yields	2.10%
[6] Prospective DCF Return	11.83%
[7] Average	11.86%
[8] Market Risk Premium	6.66%
[9] Average beta, Comparison Company Group	0.67
[10] Risk Premium for Comparison Company Group	4.43%
[11] CAPM Rate of Return	9.63%

Notes:

[1] Source: Aspen Publishers, Blue Chip Financial Forecasts, Vol. 32, No. 6 June 1, 2013, p. 14 (Exhibit\_(AEB-2), Schedule-4.0, p. 1)

[2] Source: Morningstar (Exhibit CWK-2, Schedule-6)

[3] Source: Value Line (Exhibit CWK-2, Schedule-6)

[4] Equals  $((1 + [3])^{.25}) - 1$

[5] Value Line (Exhibit CWK-2, Schedule-6)

[6] Equals [4] + [5]

[7] Equals Average ([2], [6])

[8] Equals [7] - [1]

[9] Source: Value Line (Exhibit CWK-2, Schedule-6)

[10] Equals [8] x [9]

[11] Equals [1] + [10]

PROXY GROUP OF CHARLES W. KING  
 CURRENT AUTHORIZED ROE

			[1]	[1]	[1]	[1]
			RRA			
			Requested Date	Requested ROE	Authorized Date	Authorized ROE
ALLETE, Inc.	ALLETE (Minnesota Power) Superior Water, Light and Power Company	Minnesota Wisconsin	11/2/2009	10.38%	11/2/2010	10.38%
Alliant Energy Corporation	Interstate Power and Light Company	Iowa	3/10/2010	10.85%	12/15/2010	10.44%
	Wisconsin Power and Light Company	Minnesota Wisconsin	5/7/2010 5/3/2012	10.50% 10.40%	8/12/2011 6/15/2012	10.35% 10.40%
Cleco Corp.	Cleco Power LLC	Louisiana	7/14/2008	12.25%	10/14/2009	10.70%
Duke Energy Corporation	Duke Energy Carolinas, LLC	North Carolina South Carolina	7/1/2011 8/5/2011	11.25% 11.50%	1/27/2012 1/25/2012	10.50% 10.50%
	Duke Energy Florida, Inc.	Florida	3/20/2009	12.54%	3/5/2010	10.50%
	Duke Energy Indiana, Inc.	Indiana	12/30/2002	11.20%	5/18/2004	10.50%
	Duke Energy Kentucky, Inc.	Kentucky	5/31/2006	11.50%	12/21/2006	N/A
	Duke Energy Ohio, Inc.	Ohio	7/9/2012	10.60%	5/1/2013	9.84%
	Duke Energy Progress, Inc.	North Carolina South Carolina	10/12/2012 3/1/1988	11.25%	5/30/2013 8/29/1988	10.20%
El Paso Electric Company	El Paso Electric Company	New Mexico Texas	5/29/2009 2/1/2012	11.50% 10.60%	12/10/2009 5/18/2012	N/A N/A
Empire District Electric Company	Empire District Electric Company	Arkansas Kansas Oklahoma	11/4/2009	11.30%	6/23/2010	N/A
	Empire District Gas Company	Missouri Missouri	7/6/2012	10.60%	2/27/2013	N/A
Great Plains Energy, Inc.	Kansas City Power & Light Company	Kansas	4/20/2012	10.40%	12/13/2012	9.50%
	KCP&L Greater Missouri Operations Company	Missouri Missouri	2/27/2012 2/27/2012	10.30% 10.30%	1/9/2013 1/9/2013	9.70% 9.70%
IDACORP, Inc.	Idaho Power Co.	Idaho Oregon	6/1/2011 7/29/2011	10.50% 10.50%	12/30/2011 2/23/2012	N/A 9.90%
NorthWestern Corporation	NorthWestern Corporation	Wyoming Nebraska Montana South Dakota	10/16/2009 11/5/1980	10.90%	12/9/2010 4/17/1981	10.25%
PG&E Corporation	Pacific Gas and Electric Company	California	4/20/2012	11.00%	12/20/2012	10.40%
Pinnacle West Capital Corp.	Arizona Public Service Company	Arizona	6/1/2011	11.00%	5/15/2012	10.00%
Portland General Electric Company	Portland General Electric Company	Oregon	2/16/2010	10.50%	12/17/2010	10.00%
Southern Company	Alabama Power Company	Alabama	3/9/1982		10/12/1982	
	Georgia Power Company	Georgia	7/1/2010	11.95%	12/29/2010	11.15%
	Gulf Power Company	Florida	7/8/2011	11.70%	2/27/2012	10.25%
	Mississippi Power Company	Mississippi	1/25/2013	9.70%	3/5/2013	9.70%
Westar Energy, Inc.	Kansas Gas and Electric Company	Kansas	8/25/2011	10.60%	4/18/2012	N/A
	Westar Energy (KPL)	Kansas	8/22/2011	10.60%	4/18/2012	N/A
Wisconsin Energy Corporation	Wisconsin Electric Power Company	Michigan Wisconsin	7/5/2011 3/23/2012	10.40% 10.40%	6/26/2012 11/28/2012	10.10% 10.40%
	Wisconsin Gas LLC	Wisconsin				
Xcel Energy Inc.	Northern States Power Company - MN	Minnesota North Dakota [5]	11/2/2012	10.60%	7/3/2013	9.83%
	Northern States Power Company - WI	South Dakota Michigan Wisconsin	6/29/2012	10.65%	4/18/2013	N/A
	Public Service Company of Colorado	Colorado	6/1/2012	10.40%	12/14/2012	10.40%
	Southwestern Public Service Company	New Mexico Texas	11/22/2011 2/28/2011 11/15/2012	10.75% 11.25% 10.65%	4/26/2012 12/28/2011 6/6/2013	10.00% N/A N/A
Proxy Group Average				10.88%		10.21%

Notes

- [1] Source: Regulatory Research Associates, July 26, 2013
- [2] Database represents the cases covered by Regulatory Research Associates
- [3] Excluded Natural Gas Rate Cases
- [4] Excluded Rate Case Decisions that occurred before January 1, 2000
- [5] ROE excluded since it is the subject of this proceeding.

ELECTRIC UTILITY RATE CASE AWARDS  
 SINCE JANUARY 1, 2012

Line No.	State	Utility	Parent Company Ticker	Case Identification	Date (Authorized)	Regulated Generation (Yes/No)	Authorized ROE
1	Arizona	Arizona Public Service Co.	PNW	D-E-01345A-11-0224	5/15/2012	Yes	10.00%
2	Arizona	Tucson Electric Power Co.	UNS	D-E-01933A-12-0291	6/11/2013	Yes	10.00%
3	California	California Pacific Electric Co	AQN	A-12-02-014	11/29/2012	No	9.88%
4	California	Pacific Gas and Electric Co.	PCG	Ap-12-04-018 (Elec)	12/20/2012	Yes	10.40%
5	California	San Diego Gas & Electric Co.	SRE	Ap-12-04-016 (Elec)	12/20/2012	Yes	10.30%
6	California	Southern California Edison Co.	EIX	Ap-12-04-015	12/20/2012	Yes	10.45%
7	Colorado	Public Service Co. of CO	XEL	D-11AL-947E	4/26/2012	Yes	10.00%
8	District of Columbia	Potomac Electric Power Co.	POM	FC-1087	9/26/2012	No	9.50%
9	Delaware	Delmarva Power & Light Co.	POM	D-11-528	11/29/2012	No	9.75%
10	Florida	Florida Power & Light Co.	NEE	D-120015-EI	12/13/2012	Yes	10.50%
11	Florida	Gulf Power Co.	SO	D-110138-EI	2/27/2012	Yes	10.25%
12	Hawaii	Hawaii Electric Light Co	HE	D-2009-0164	4/4/2012	Yes	10.00%
13	Hawaii	Hawaiian Electric Co.	HE	D-2010-0080	6/29/2012	Yes	10.00%
14	Hawaii	Maui Electric Company Ltd	HE	D-2011-0092	5/31/2013	Yes	9.00%
15	Hawaii	Maui Electric Company Ltd	HE	D-2009-0163	5/2/2012	Yes	10.00%
16	Idaho	Avista Corp.	AVA	C-AVU-E-12-08	3/27/2013	Yes	9.80%
17	Illinois	Ameren Illinois	AEE	D-12-0293	12/5/2012	No	9.71%
18	Illinois	Ameren Illinois	AEE	D-12-0001	9/19/2012	No	10.05%
19	Illinois	Commonwealth Edison Co.	EXC	D-12-0321	12/19/2012	No	9.71%
20	Illinois	Commonwealth Edison Co.	EXC	D-11-0721	5/29/2012	No	10.05%
21	Indiana	Indiana Michigan Power Co.	AEP	Ca-44075	2/13/2013	Yes	10.20%
22	Kansas	Kansas City Power & Light	GXP	D-12-KCPE-764-RTS	12/13/2012	Yes	9.50%
23	Kentucky	Kentucky Utilities Co.	PPL	C-2012-00221	12/20/2012	Yes	10.25%
24	Kentucky	Louisville Gas & Electric Co.	PPL	C-2012-00222 (elec.)	12/20/2012	Yes	10.25%
25	Louisiana	Southwestern Electric Power Co	AEP	D-U-32220	2/27/2013	Yes	10.00%
26	Maryland	Baltimore Gas and Electric Co.	EXC	C-9299 (elec)	2/22/2013	No	9.75%
27	Maryland	Delmarva Power & Light Co.	POM	C-9285	7/20/2012	No	9.81%
28	Maryland	Potomac Electric Power Co.	POM	C-9311	7/12/2013	No	9.36%
29	Maryland	Potomac Electric Power Co.	POM	C-9286	7/20/2012	No	9.31%
30	Michigan	Consumers Energy Co.	CMS	C-U-17087	5/15/2013	Yes	10.30%
31	Michigan	Consumers Energy Co.	CMS	C-U-16794	6/7/2012	Yes	10.30%
32	Michigan	Indiana Michigan Power Co.	AEP	C-U-16801	2/15/2012	Yes	10.20%
33	Michigan	Wisconsin Electric Power Co.	WEC	C-U-16830	6/26/2012	Yes	10.10%
34	Minnesota	Northern States Power Co. - MN	XEL	D-E-002/GR-10-971	3/29/2012	Yes	10.37%
35	Missouri	Kansas City Power & Light	GXP	C-ER-2012-0174	1/9/2013	Yes	9.70%
36	Missouri	KCP&L Greater Missouri Op Co	GXP	C-ER-2012-0175 (L&P)	1/9/2013	Yes	9.70%
37	Missouri	KCP&L Greater Missouri Op Co	GXP	C-ER-2012-0175 (MPS)	1/9/2013	Yes	9.70%
38	Missouri	Union Electric Co.	AEE	C-ER-2012-0166	12/12/2012	Yes	9.80%
39	Mississippi	Mississippi Power Co.	SO	D-2013-UN-0014	3/5/2013	Yes	9.70%
40	North Carolina	Duke Energy Carolinas LLC	DUK	D-E-7, Sub 989	1/27/2012	Yes	10.50%
41	North Carolina	Duke Energy Progress Inc.	DUK	D-E-2, Sub 1023	5/30/2013	Yes	10.20%
42	North Carolina	Virginia Electric & Power Co.	D	D-E-22, Sub 479	12/21/2012	Yes	10.20%
43	North Dakota	Northern States Power Co. - MN	XEL	C-PU-10-657	2/29/2012	Yes	10.40%
44	New Jersey	Atlantic City Electric Co.	POM	D-ER-12121071	6/21/2013	No	9.75%
45	New Jersey	Atlantic City Electric Co.	POM	D-ER-11080469	10/23/2012	No	9.75%
46	New York	Niagara Mohawk Power Corp.	-	D-12-E-0201	3/14/2013	No	9.30%
47	New York	Orange & Rockland Utlts Inc.	ED	C-11-E-0408	6/14/2012	No	9.40%
48	Ohio	Duke Energy Ohio Inc.	DUK	C-12-1682-EL-AIR	5/1/2013	Yes	9.84%
49	Oklahoma	Oklahoma Gas and Electric Co.	OGE	Ca-PUD201100087	7/9/2012	Yes	10.20%
50	Oregon	Idaho Power Co.	IDA	D-UE-233	2/23/2012	Yes	9.90%
51	Oregon	PacifiCorp	BRK.A	D-UE-246	12/20/2012	Yes	9.80%
52	Pennsylvania	PPL Electric Utilities Corp.	PPL	D-R-2012-2290597	12/5/2012	No	10.40%
53	Rhode Island	Narragansett Electric Co.	-	D-4323 (electric)	12/20/2012	No	9.50%
54	South Carolina	Duke Energy Carolinas LLC	DUK	D-2011-271-E	1/25/2012	Yes	10.50%
55	South Carolina	South Carolina Electric & Gas	SCG	D-2012-218-E	12/19/2012	Yes	10.25%
56	South Dakota	Northern States Power Co. - MN	XEL	D-EL11-019	6/19/2012	Yes	9.25%
57	Texas	Cross Texas	-	D-40604	1/16/2013	No	9.60%
58	Texas	Entergy Texas Inc.	ETR	D-39896	9/13/2012	Yes	9.80%
59	Texas	Lone Star Transmission LLC	NEE	D-40020	10/12/2012	No	9.60%
60	Texas	Wind Energy Transmission Texas	-	D-40606	1/16/2013	No	9.60%
61	Utah	PacifiCorp	BRK.A	D-11-035-200	9/19/2012	Yes	9.80%
62	Washington	Avista Corp.	AVA	D-UE-120436	12/26/2012	Yes	9.80%
63	Washington	Puget Sound Energy Inc.	-	D-UE-130137	6/25/2013	Yes	9.80%
64	Washington	Puget Sound Energy Inc.	-	D-UE-111048	5/7/2012	Yes	9.80%
65	Wisconsin	Madison Gas and Electric Co.	MGEE	D-3270-UR-118 (elec)	11/9/2012	Yes	10.30%
66	Wisconsin	Northern States Power Co - WI	XEL	D-4220-UR-118 (elec)	12/14/2012	Yes	10.40%
67	Wisconsin	Wisconsin Electric Power Co.	WEC	D-05-UR-106 (WEP-Elec)	11/28/2012	Yes	10.40%
68	Wisconsin	Wisconsin Power and Light Co	LNT	D-6680-UR-118 (elec)	6/15/2012	Yes	10.40%
69	Wisconsin	Wisconsin Public Service Corp.	TEG	D-6690-UR-121 (Elec)	10/24/2012	Yes	10.30%
70	Wyoming	Cheyenne Light Fuel Power Co.	BKH	D-20003-114-ER-11 (elec)	6/18/2012	Yes	9.60%
71	Wyoming	PacifiCorp	BRK.A	D-20000-405-ER-11	7/16/2012	Yes	9.80%
72	Average (Regulated Generation= Yes)						10.04%

Notes  
 [1] Source: SNL Financial

TEST YEAR - 2013 FORECASTED SHORT TERM DEBT AND COST [1]

	Cost of Short Term Debt				
	Month End Balances	Average Of Month End Balances [2]	Monthly Interest Expense [3]	Monthly Fees Expense [4]	Average Short Term Debt Cost
Jan-13	\$315,968,796	\$305,631,665	\$131,591	54,134	
Feb-13	\$286,574,492	\$301,271,644	\$117,161	49,016	
Mar-13	\$269,885,092	\$278,229,792	\$119,793	54,134	
Apr-13	\$314,527,474	\$292,206,283	\$97,402	52,428	
May-13	\$64,388,373	\$189,457,923	\$65,258	54,134	
Jun-13	\$114,902,537	\$89,645,455	\$29,882	52,428	
Jul-13	\$186,650,076	\$150,776,307	\$51,934	54,134	
Aug-13	\$131,177,760	\$158,913,918	\$54,737	54,134	
Sep-13	\$103,724,368	\$117,451,064	\$39,150	52,428	
Oct-13	\$197,684,110	\$150,704,239	\$51,909	54,134	
Nov-13	\$227,714,066	\$212,699,088	\$70,900	52,428	
Dec-13	\$217,260,508	\$222,487,287	\$76,635	54,134	
Average	\$202,538,138	\$205,789,555			
Total			\$906,352	\$637,666	
			0.44%	0.31%	0.75%

Notes:

[1] Company provided data

[2] January Through December Average of Month End Balances

[3] Monthly Interest Expense based on weighted average of short term debt outstanding.  
 Interest Rates based on July 2012 Global Insights Inc. Forecast.

[4] Ongoing fees for NSP-MN's five-year credit facility that was re-syndicated July 27, 2012.  
 Credit facility is used primarily as back up for commercial paper and letters of credit.  
 Upfront expenses for the five year credit facility are amortized over the life of the facility and  
 are included in the cost of long term debt. This expense represents the  
 monthly cost of NSP-MN unused portion of the credit facility.

**ND Electric Jurisdiction -- Actual Weather Normalized Returns**

	<b>2012</b>	<b>2011</b>	<b>2010 [1]</b>	<b>2009</b>	<b>2008</b>
Weather-Normal Rate of Return on Rate Base (ROR):	7.32%	7.65%	4.13%	8.37%	8.70%
Weather-Normalized Return on Equity (ROE):	8.92%	9.05%	2.19%	10.16%	10.73%

Notes:

[1] 2010: Reported Actual and weather-normalized Returns on Equity (ROE) reflect a one time deferred fuel expense write-off of \$11,125,000. Adjusting for this item would result in an actual ROE of 6.81%.

[2] Source: Company annual filings with Noth Dakota Public Service Commission