

**STATE OF ILLINOIS  
ILLINOIS COMMERCE COMMISSION**

**Liberty Utilities (Midstates Natural  
Gas) Corp. d/b/a Liberty Utilities** :  
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:  
Proposed General Increase in : Docket No. 14-0371  
Natural Gas Rates :

REBUTTAL TESTIMONY OF

ROBERT B. HEVERT

SUSSEX ECONOMIC ADVISORS, LLC

SUBMITTED ON BEHALF OF

LIBERTY UTILITIES (MIDSTATES NATURAL GAS) CORP. D/B/A LIBERTY UTILITIES

**TABLE OF CONTENTS**

I.	INTRODUCTION .....	1
II.	PURPOSE AND OVERVIEW OF TESTIMONY .....	2
III.	SUMMARY OF TESTIMONY .....	3
IV.	RESPONSE TO COMMISSION STAFF WITNESS, MS. PHIPPS .....	6
	Capital Structure.....	9
	Cost of Debt.....	24
	Application of the Multi-Stage DCF Analysis .....	25
	Application of the Capital Asset Pricing Model .....	35
	Relevance and Application of Bond Yield Plus Risk Premium Approach .....	48
	Recovery of Flotation Costs.....	49
V.	SUMMARY OF UPDATED ANALYSES .....	51
VI.	CONCLUSIONS AND RECOMMENDATION .....	54

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4   **OF**

5   **ROBERT B. HEVERT**

6   **SUSSEX ECONOMIC ADVISORS, LLC**

7   **Submitted on Behalf Of**

8   **Liberty Utilities**

9   **I.    INTRODUCTION**

10 **Q.    Please state your name, affiliation and business address.**

11 A.    My name is Robert B. Hevert. I am Managing Partner of Sussex Economic  
12 Advisors, LLC (“Sussex”). My business address is 161 Worcester Road, Suite  
13 503, Framingham, Massachusetts 01701.

14 **Q.    Are you the same Robert B. Hevert who previously sponsored direct  
15 testimony in this proceeding?**

16 A.    Yes, I am. I provided direct testimony (“Direct Testimony”) before the Illinois  
17 Commerce Commission (“Commission”) on behalf of Liberty Utilities (Midstates  
18 Natural Gas) Corporation d/b/a Liberty Utilities (“Liberty Utilities” or the  
19 “Company”), an indirect wholly owned subsidiary of Algonquin Power & Utilities  
20 Corp. (“APUC”).

21 **II. PURPOSE AND OVERVIEW OF TESTIMONY**

22 **Q. What is the purpose of your Rebuttal Testimony?**

23 A. The purpose of my Rebuttal Testimony is to respond to the testimony of Ms.  
24 Rochelle M. Phipps on behalf of the Staff of the Illinois Commerce Commission  
25 as her direct testimony relates to the Company's Return on Equity ("ROE"),  
26 capital structure and cost of debt. My Rebuttal Testimony also provides an  
27 updated set of calculations and analytical results with respect to the Company's  
28 Cost of Equity in this proceeding.<sup>1</sup> My analyses and conclusions are supported  
29 by the data presented in Schedules 7.1 through 7.17, which have been prepared  
30 by me or under my direction.

31 **Q. How is the remainder of your Direct Testimony organized?**

32 A. The remainder of my Direct Testimony is organized as follows:

- 33 • Section III – Provides a summary of my primary conclusions and  
34 recommendations;
- 35 • Section IV – Provides my response to Ms. Phipps' regarding the  
36 Company's cost of capital and capital structure;
- 37 • Section V – Provides my updated analyses; and
- 38 • Section VI – Summarizes my conclusions and recommendations.

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<sup>1</sup> Throughout my Rebuttal Testimony, I interchangeably use the terms "ROE" and "Cost of Equity."

39 **III. SUMMARY OF TESTIMONY**

40 **Q. Please summarize the key issues and recommendations addressed in your**  
41 **Rebuttal Testimony.**

42 A. The 43.51 percent common equity ratio Ms. Phipps recommends is inconsistent  
43 with industry practice and well below the equity ratios recently authorized by  
44 regulatory commissions around the country for natural gas utilities.<sup>2</sup> If adopted,  
45 Ms. Phipps' recommendation would increase the Company's financial risk, place  
46 significant downward pressure on its financial profile, and likely increase its  
47 overall cost of capital. The Company's proposed capital structure, on the other  
48 hand, is consistent with industry practice and accounts for the business risks  
49 faced by the Company.<sup>3</sup> As such, I continue to support the Company's proposed  
50 capital structure as reasonable and appropriate.

51 In my Direct Testimony, I recommended an ROE of 10.50 percent, based  
52 on a range of ROE estimates from 10.00 percent to 10.50 percent.<sup>4</sup> As my Direct  
53 Testimony discussed, that recommendation, and the analytical results on which it  
54 was based, considered a variety of factors including prevailing capital market  
55 conditions and the specific risks faced by Liberty Utilities. Because the  
56 application of financial models and interpretation of their results often is the  
57 subject of differences among analysts in regulatory proceedings, I believe that it  
58 is important to review and consider a variety of data points; doing so enables us

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<sup>2</sup> *Ibid.*, at 3. See Schedules 7.11 and 7.13 for the proxy group capital structures and recently authorized equity ratios, respectively.

<sup>3</sup> See Direct Testimony of Robert B. Hevert at 36-46 for a discussion of the Company's business risks including small size, regulatory environment and exposure to weather variability.

<sup>4</sup> See Direct Testimony of Robert B. Hevert, at 3.

59 to put in context both quantitative analyses and the associated  
60 recommendations. As such, I have updated many of the analyses contained in  
61 my Direct Testimony, and provided several new analyses in response to issues  
62 raised by Ms. Phipps. Those analyses continue to support a reasonable range of  
63 ROE estimates from 10.00 percent to 10.50 percent, and within that range, 10.50  
64 percent as a reasonable and appropriate estimate of the Company's Cost of  
65 Equity.

66 In this proceeding, there is a meaningful difference in my ROE  
67 recommendation and the 9.23 percent ROE recommendation offered by Ms.  
68 Phipps.<sup>5</sup> As discussed throughout my Rebuttal Testimony, there are a number of  
69 methodological, theoretical and practical reasons why a recommendation as low  
70 as 9.23 percent is unreasonably low. For example, Ms. Phipps develops her  
71 recommendation by giving 50.00 percent weight to an 8.26 percent Discounted  
72 Cash Flow ("DCF") estimate that is nearly 60 basis points below the lowest ROE  
73 authorized by any regulatory commission for a natural gas utility in at least 30  
74 years. Ms. Phipps' 8.26 percent DCF estimate also is 142 basis points below the  
75 9.68 percent average authorized natural gas ROE reported by Regulatory  
76 Research Associates from January 2013 through July 2014. Despite the  
77 significant effect of that DCF estimate on her ROE recommendation, and  
78 notwithstanding the fact that the results are so low as to be highly improbable  
79 relative to observed authorized returns, Ms. Phipps has not explained why  
80 Liberty Utilities is so less risky, or how it is that present capital market conditions

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<sup>5</sup> See Direct Testimony of Rochelle M. Phipps, at 2.

81 are so benign that investors would reduce their return requirements far below the  
82 returns available to other natural gas utilities.

83 While I am not suggesting that the Commission should be bound by the  
84 decisions made in other regulatory jurisdictions, given that investors consider  
85 such data in framing their investment decisions, and knowing that the  
86 Commission sees such data as an important benchmark, return  
87 recommendations that materially deviate from observed industry norms should  
88 be supported by clear and unambiguous reasons explaining those deviations.

89 **Q. Please now summarize the updated analyses contained in your Rebuttal**  
90 **Testimony.**

91 A. I have updated the Multi-Stage DCF, Capital Asset Pricing Models ("CAPM"), and  
92 Bond Yield Plus Risk Premium analysis based on data through July 31, 2014 and  
93 applied those analyses to the proxy group contained in my Direct Testimony.  
94 Taken together, the analyses discussed throughout my Rebuttal Testimony  
95 continue to support my recommended range of 10.00 percent to 10.50 percent,  
96 and my ROE recommendation of 10.50 percent. The results of my analyses are  
97 summarized in Table 1 (below).

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**Table 1: Summary of Analytical Results**

	<i>Low</i>	<i>Mean</i>	<i>High</i>
<b>Multi-Stage DCF</b>			
<b>30-Day Average</b>	9.28%	9.60%	10.05%
<b>CAPM Results</b>			
		<b><i>Bloomberg Derived Market Risk Premium</i></b>	<b><i>Value Line Derived Market Risk Premium</i></b>
<i>Average Value Line Beta Coefficient</i>			
Current 30-Year Treasury (3.35%)		10.33%	10.45%
Near Term Projected 30-Year Treasury (4.03%)		11.01%	11.13%
<i>Average Five-Year Calculated Beta Coefficient</i>			
Current 30-Year Treasury (3.35%)		10.23%	10.35%
Near Term Projected 30-Year Treasury (4.03%)		10.92%	11.03%
<b>Alternate CAPM Results</b>			
		<b><i>Bloomberg Derived Market Risk Premium</i></b>	<b><i>Value Line Derived Market Risk Premium</i></b>
<i>Average Bloomberg Beta Coefficient</i>			
Current 30-Year Treasury (3.35%)		11.25%	11.19%
Near Term Projected 30-Year Treasury (4.03%)		11.93%	11.87%
<i>Average 18-Month Calculated Beta Coefficient</i>			
Current 30-Year Treasury (3.35%)		12.80%	12.74%
Near Term Projected 30-Year Treasury (4.03%)		13.49%	13.42%
<b>Flotation Cost</b>		0.13%	

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100 **IV. RESPONSE TO COMMISSION STAFF WITNESS, MS. PHIPPS**

101 **Q. Please summarize Ms. Phipps' cost of capital and capital structure**  
102 **recommendations.**

103 **A.** Ms. Phipps recommends an ROE of 9.23 percent, a cost of short-term debt of  
104 1.41 percent, and a cost of long-term debt of 4.76 percent for Liberty Utilities'

105 natural gas operations. Her ROE recommendation is based on the average of  
106 her 8.26 percent Non-Constant DCF (“NCDCF”) model results and 9.56 percent  
107 CAPM results, and includes a 32 basis point upward adjustment to reflect the  
108 Company’s weaker credit rating relative to the proxy group.<sup>6</sup> For the cost of  
109 short-term and long-term debt, Ms. Phipps’ recommends imputing the  
110 consolidated cost of debt from Liberty Utilities’ intermediate parent, Liberty  
111 Utilities Company (“LUC”).

112 Ms. Phipps also recommends a capital structure consisting of 0.46 percent  
113 short-term debt, 56.03 percent long-term debt and 43.51 percent equity.<sup>7</sup> Stating  
114 that she has “little confidence” in the Company’s capital structure data,<sup>8</sup> Ms.  
115 Phipps recommends an imputed capital structure based on:

- 116 (1) the proxy groups’ three-year average common equity ratio, adjusted  
117 downward to reflect LUC’s lower credit rating;
- 118 (2) LUC’s average annualized net outstanding short-term debt ratio as of  
119 December 31, 2013; and
- 120 (3) assigning the remaining capital structure to long-term debt.<sup>9</sup>

121 **Q. Please summarize the key areas in which you and Ms. Phipps are in**  
122 **agreement.**

123 A. There are several important areas in which I agree with Ms. Phipps. Those  
124 areas, which otherwise could significantly expand the scope of contested issues,

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<sup>6</sup> See Direct Testimony of Rochelle M. Phipps, at 34-35.

<sup>7</sup> *Ibid.*, at 2-3.

<sup>8</sup> *Ibid.*, at 4.

<sup>9</sup> *Ibid.*, at 5-6.

125 include: (1) reliance on the Multi-Stage DCF model, including the use of earnings  
126 projections and an estimate of sustainable growth in the near-term stage and the  
127 use of GDP growth as an estimate of long-term (terminal) growth; (2) reliance on  
128 the CAPM approach, including the use of 30-day average 30-year Treasury  
129 yields as the risk-free rate and a Market Risk Premium based on a similarly  
130 derived, forward-looking expected market return; and (3) that Liberty Utilities'  
131 capital structure is an important determinant of the Company's financial strength  
132 and ability to access capital at reasonable terms under a wide range of economic  
133 conditions.

134 **Q. What are the major points of disagreement between you and Ms. Phipps?**

135 A. There are several areas in which I disagree with Ms. Phipps, including: (1) the  
136 appropriate capital structure, (2) the appropriate cost of debt; (3) the application  
137 of the Multi-Stage DCF analysis, including the long-term growth rate and payout  
138 ratios used in the model, and the weight to be given to a result far below the  
139 recent average of authorized natural gas ROEs;<sup>10</sup> (4) the application of the  
140 CAPM; (5) the relevance and the application of the Bond Yield Plus Risk  
141 Premium analysis; and (6) the recovery of flotation costs.

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<sup>10</sup> Ms. Phipps' 8.26 percent DCF estimate is 142 basis points below the 9.68 percent average authorized natural gas ROE reported by SNL from January 2013 through July 2014. See Schedule 7.13.

142 **Capital Structure**

143 **Q. Please briefly summarize Ms. Phipps' recommendation regarding the**  
144 **Company's capital structure.**

145 A. Ms. Phipps recommends a common equity ratio of 43.51 percent, which she  
146 calculates by applying a 6.40 percentage point (640 basis points) downward  
147 adjustment to her estimate of the proxy group's average equity ratio.<sup>11</sup> Ms.  
148 Phipps also recommends a 0.46 percent short-term debt ratio, based on the  
149 average net short-term debt outstanding at LUC for the twelve months ending  
150 June 30, 2014.<sup>12</sup> Assigning the remaining capital structure to long-term debt, Ms.  
151 Phipps then recommends a long-term debt ratio of 56.03 percent.<sup>13</sup>

152 Ms. Phipps disagrees with the use of Liberty Utilities' actual capital  
153 structure because (1) she believes the capital structure data for Liberty Utilities  
154 "is not reliable", and (2) Liberty Utilities does not issue its own debt or equity.<sup>14</sup>

155 **Q. What is your response to Ms. Phipps' position that it is reasonable to**  
156 **impute a capital structure in this proceeding because LUC provides both**  
157 **the debt and equity capital to Liberty Midstates?**<sup>15</sup>

158 A. Ms. Phipps notes that debt investors have a priority claim on cash flows relative  
159 to equity investors, who are the residual claimants.<sup>16</sup> I agree with Ms. Phipps on  
160 that point; residual risk is what causes equity investors to require higher returns

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<sup>11</sup> See Direct Testimony of Rochelle M. Phipps, at 5-6.

<sup>12</sup> *Ibid.*, at 3, 6. See also, Schedule 3.01, 3.02.

<sup>13</sup> *Ibid.*, at 3, Schedule 3.01.

<sup>14</sup> *Ibid.*, at 3, 5.

<sup>15</sup> *Ibid.*, at 5.

<sup>16</sup> *Ibid.*

161 than debt investors. Ms. Phipps goes on to suggest, however, that when an  
162 investor provides the debt and equity capital, the distinction between priority and  
163 residual cash flow claims is lost. That is, Ms. Phipps states that when a single  
164 entity is the debt and equity investor, “there is no splitting of the company’s net  
165 cash flows.”<sup>17</sup> On that point I disagree with Ms. Phipps. The fact that a single  
166 entity holds both debt and equity capital does not diminish the priority claim  
167 afforded debt securities, nor does it confer a priority position on residual cash  
168 flows. The allocation of cash flows is determined by the terms of the securities,  
169 not by the identity of the securities’ holders.

170 For example, it is entirely likely that institutional investors could hold both  
171 debt and equity securities in a given company. That they would do so simply is a  
172 function of their investment policies and objectives. In my practical experience, it  
173 is unlikely that an institutional investor would invest in the debt and equity  
174 securities of a given company, but make no distinction in the returns required for  
175 each. Yet, that is what Ms. Phipps’ position appears to suggest.

176 Ms. Phipps’ position also suggests that two firms identical in all respects  
177 but for the identity of the debt and equity investors would have different  
178 fundamental valuations. That is not feasible since such valuation differences  
179 would be arbitrated away. In addition, Ms. Phipps’ position suggests that a  
180 firm’s value could change not because its fundamental risks and expected cash  
181 flows had changed, but because the identity of its investors had changed. Again,  
182 that is not a feasible outcome. As such, I disagree with Ms. Phipps’ position.

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<sup>17</sup> *Ibid.*, at 5.

183 **Q. Do you agree with the approach used by Ms. Phipps to arrive at her**  
184 **hypothetical capital structure?**

185 A. No, I do not. In particular I disagree with Ms. Phipps' (1) use of short-term debt  
186 in developing the recommended capital structure; and (2) downward adjustment  
187 to Liberty Utilities' equity ratio to reflect the Company's lower credit rating relative  
188 to the proxy group. The equity ratio is an important factor in a company's overall  
189 risk profile and has a strong influence on its credit rating and, therefore, cost of  
190 capital. As the equity ratio decreases, the degree of financial leverage and,  
191 therefore, financial risk increases. In essence, Ms. Phipps asks the Company to  
192 adopt a degree of financial leverage that is far removed from industry practice,  
193 and which exposes Liberty Utilities to additional risk.

194 As discussed in my Direct Testimony, utilities face both business and  
195 financial risk.<sup>18</sup> With regard to financial risk, increasing financial leverage  
196 increases the risk that a company may not have adequate cash flow to meet its  
197 financial obligations.<sup>19</sup> All else remaining equal, a meaningful increase in  
198 financial leverage is likely to lead to a higher cost of both debt and equity. Since  
199 APUC's and LUC's credit ratings already are below the proxy group's average  
200 credit rating, Ms. Phipps' proposal would only further increase the Company's  
201 financial risk. To the extent Liberty Utilities faces incremental business risks  
202 associated with its relatively small size, regulatory environment and exposure to  
203 weather variability, it would be reasonable for it to finance its operations with an

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<sup>18</sup> See Direct Testimony of Robert B. Hevert, at 8-10, 53.

<sup>19</sup> *Ibid.*, at 53.

204 equity ratio above the average equity ratio of the proxy group companies, not  
205 substantially below, as Ms. Phipps suggests.

206 **Q. Is Liberty Utilities' proposed capital structure reasonable?**

207 A. One reasonable means of assessing the Company's proposed capital structure is  
208 to consider observable and relevant benchmarks such as the capital structures in  
209 place at the proxy companies, or that of Liberty Utilities' parent company, APUC.  
210 As shown in Schedule 7.11, relative to those measures, the Company's capital  
211 structure is consistent with industry practice. Liberty Utilities' 60.10 percent  
212 equity ratio is within the range of the proxy group equity ratios, and generally  
213 consistent with the 56.64 percent average equity ratio of APUC (which is the  
214 ultimate source of both LUC and Liberty Utilities' equity, and influences the credit  
215 rating of the debt that finances their operations)<sup>20</sup> over the past eight fiscal  
216 quarters.<sup>21</sup>

217 **Q. What accounts for the difference between the proxy group average equity  
218 ratios reported by Ms. Phipps and you?**

219 A. Ms. Phipps' inclusion of short-term debt in her capital structure analysis is the  
220 primary reason her 49.91 percent estimate of the proxy group average equity  
221 ratio is substantially below the 55.77 percent shown in Schedule 7.11. As  
222 discussed in more detail below, in my experience utilities generally do not use  
223 short-term debt to fund the type of long-lived assets included in rate base. Much

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<sup>20</sup> Standard & Poor's notes its ratings of Algonquin Power & Utilities Corporation's subsidiaries reflects the parent company's consolidated credit position. See, *Algonquin Power & Utilities Corp., Liberty Utilities Co., And Algonquin Power Co. Ratings Raised To 'BBB'*, Standard & Poor's Ratings Service, October 11, 2013, at 2.

<sup>21</sup> Financial data as reported by Algonquin Power and Utilities Corporation in Securities and Exchange Commission filings. Source: SNL Financial.

224 of the short-term debt Ms. Phipps includes in her capital structure analysis may  
225 be associated with construction work in progress (“CWIP”) or seasonal gas  
226 inventories. To that point, Ms. Phipps’ Schedule 3.03 shows the vast majority  
227 (91.49 percent) of LUC’s monthly average short-term debt outstanding is  
228 associated with CWIP, while the remaining short-term debt occurs during winter  
229 and shoulder months when gas inventory and receivables are elevated.  
230 Similarly, a review of the work paper supporting Ms. Phipps’ capital structure  
231 analysis shows that several of her proxy companies use little or no short-term  
232 debt outside of the first and fourth quarters (the winter and shoulder months).

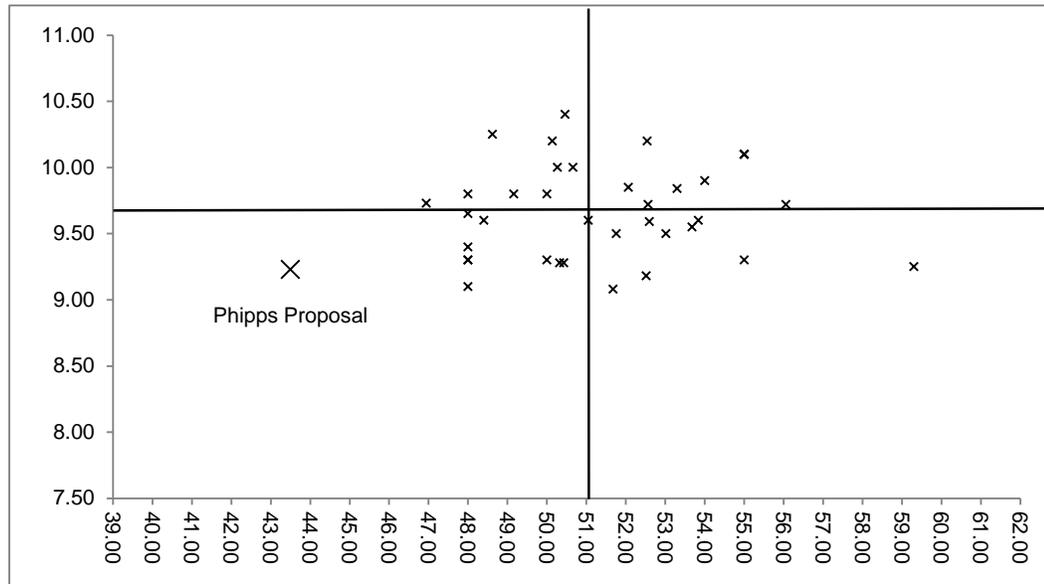
233 As shown in Schedule 7.12, excluding short-term debt from Ms. Phipps  
234 capital structure analysis produces a proxy group common equity ratio of 54.59  
235 percent, which is generally consistent with my 55.77 percent estimate.

236 **Q. How does Ms. Phipps’ equity ratio recommendation compare to natural gas**  
237 **utility authorized equity ratios in other jurisdictions?**

238 A. It is well below the 51.44 percent average authorized equity ratio since January  
239 2013 (see Schedule 7.13). Looking at the authorized ROEs and equity ratios by  
240 quadrants (based on the group medians), we see that Ms. Phipps’ proposal  
241 would be the lowest combination of authorized equity returns and equity ratios,  
242 by far, of any company in at least the past year and a half.

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**Chart 1: Recent Authorized ROEs and Equity Ratios<sup>22</sup>**



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I recognize that there may be differences across regulatory jurisdictions in the calculation of equity ratios, and that viewing one company relative to another may not always be an apt comparison. That said, Ms. Phipps' ROE and capital structure recommendations are so far removed from those recently observed in the industry that it is difficult to reconcile the difference. Even looking to the bottom quadrant (that is, the lower left-hand quadrant, which contains the lowest ROEs and lowest equity ratios), Ms. Phipps' proposal is incompatible with authorized returns and capital structures in other jurisdictions; the median ROE and equity ratio in that quadrant are 9.38 percent and 49.02 percent, respectively. Moreover, to the extent Liberty Utilities faces incremental business risks, I believe it would be reasonable for the Company's authorized ROE and

<sup>22</sup>

Source: Value Line. Data from January 1, 2013 through July 31, 2014. Equity ratios are before SNL adjustments for certain zero-cost non-investor-supplied capital sources such as deferred taxes in the regulatory capital structure; See, Schedule 7.13.

256 capital structure to be above the median levels shown in Chart 1.

257 I also realize that Ms. Phipps reflected her low recommended equity ratio  
 258 in a somewhat higher ROE. That adjustment, however, does not adequately  
 259 compensate investors for the considerably greater financial risk that her capital  
 260 structure recommendation creates. One perspective on that issue is the ROE  
 261 that corresponds to Ms. Phipps' recommended Weighted Equity Return (4.02  
 262 percent) at different equity ratios. As Table 2 demonstrates, assuming the  
 263 average authorized equity ratio of 51.44 percent, Ms. Phipps' recommended  
 264 Weighted Equity Return implies an ROE of 7.81 percent. Even the 49.02 percent  
 265 equity ratio associated with the lower quadrant of Chart 1 suggests and ROE of  
 266 8.19 percent. Clearly, there is no support for ROEs at such low levels.

267 **Table 2: Implied ROE at Various Equity Ratios**

	<i>Weighted Equity Return</i>	<i>Equity Ratio</i>	<i>Implied ROE</i>
Ms. Phipps' Proposal	4.02%	43.51%	9.23%
Average Authorized Equity Ratio	4.02%	51.44%	7.81%
Average Authorized Equity Ratio (Lowest Quadrant)	4.02%	49.02%	8.19%

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269 Taken from a slightly different perspective, the average equity ratio and  
 270 ROE in the lowest quadrant in Chart 1 produce a Weighted Equity Return of 4.60  
 271 percent.<sup>23</sup> Assuming Ms. Phipps' 43.51 percent equity ratio, the ROE needed to  
 272 reach that 4.60 percent Weighted Equity Return would be 10.57 percent.<sup>24</sup>  
 273 Again, although I appreciate that Ms. Phipps saw the need to adjust her

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<sup>23</sup> 4.58% = 49.02% x 9.38%.

<sup>24</sup> 4.60% / 43.51% = 10.57%.

274 recommended ROE, her proposed adjustment is inadequate to provide the  
275 Company with a reasonable return.

276 **Q. Have you conducted any analyses to determine the effect of Ms. Phipps’**  
277 **proposed equity ratio adjustment on the Company's required ROE?**

278 A. Yes, I have. Using the Hamada Equation,<sup>25</sup> which adjusts the average Beta for  
279 the level of leverage held by the underlying companies on which that  
280 measurement is made, I estimated the adjustment required for Ms. Phipps’  
281 CAPM analysis to account for the change in the equity ratio proposed by Ms.  
282 Phipps (a 640 basis point downward adjustment).

283 Using Ms. Phipps’ estimate of the proxy group average equity ratio  
284 adjusted to exclude short-term debt (54.59 percent, as discussed above) and her  
285 average Beta coefficient of 0.69, the unlevered (or “asset”) Beta is 0.45, when  
286 the tax effect of the debt portion of the capital structure is removed from the  
287 calculation. The unlevered Beta coefficient can then be re-levered to  
288 approximate the additional risk assumed by decreasing the equity ratio to any  
289 level specified.

290 As shown in Table 3 (below) and Schedule 7.14, the incremental required  
291 return associated with a 640 basis point downward adjustment to the equity ratio  
292 is approximately 60 basis points.

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<sup>25</sup> Shannon P. Pratt, Robert F. Reilly, and Robert P. Schweih, Valuing a Business, Fourth Edition, at 169.

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**Table 3: Leverage Effect, the Cost of Equity and the Weighted Average Cost of Capital**

	<i>Equity Ratio</i>	<i>CAPM ROE</i>
640 basis point equity ratio reduction	48.19%	10.16%
Phipps proxy group average equity ratio (excluding short-term debt)	54.59%	9.56%
Difference:	6.40%	0.60%

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Moreover, as shown in Schedule 7.14, based on several factors, including currently observed credit spreads for utility bonds, Moody's guidelines for Debt/Total Capital, and using Ms. Phipps' data, the equity ratio producing the lowest overall weighted cost of capital is generally consistent with the Company's requested 60.10 percent equity ratio.

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While I appreciate Ms. Phipps' concerns regarding the imprecision of calculating changes in the cost of capital associated with leverage adjustments,<sup>26</sup> it is important to recognize that Ms. Phipps' proposed adjustment is based on data associated with bond yields. The view that differences in credit ratings "notches" among investment grade utilities can be used as a proxy for differences in the Cost of Equity also fails to recognize the senior position that debt holders have relative to equity holders, and the investment horizon considered by equity holders. For example, a long-term issuer credit rating is an opinion regarding the subject company's overall financial capacity to pay its

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<sup>26</sup> See Direct Testimony of Rochelle M. Phipps, at 8.

310 financial obligations as they come due and payable.<sup>27</sup> As discussed earlier, the  
311 claims of equity holders are subordinate to the claims of debt holders. The  
312 results of my analysis indicate the magnitude of Ms. Phipps' 32 basis points ROE  
313 adjustment is substantially less than the required incremental return necessary to  
314 compensate the Company for her proposed increase in financial leverage.

315 **Q. Please briefly describe Ms. Phipps' 640 basis point downward adjustment**  
316 **to her recommended equity ratio.**

317 A. Ms. Phipps argues that an adjustment is necessary because Liberty Utilities'  
318 intermediate parent company, LUC, has a Standard & Poor's ("S&P") credit  
319 rating of BBB, which is two notches below the proxy group's A- average credit  
320 rating. Ms. Phipps calculates her recommended adjustment by taking two-thirds  
321 of the difference between the midpoints of the debt capitalization benchmark  
322 ranges reported by Moody's Investors Service ("Moody's") for the Baa and A  
323 rated debt.<sup>28</sup>

324 **Q. Do you have any concerns with Ms. Phipps' approach to calculating her**  
325 **640 basis point equity adjustment?**

326 A. Yes, I do. Ms. Phipps' adjustment assumes that companies with a given credit  
327 rating should have a precise debt capitalization according to Moody's ratings  
328 methodology. However, debt capitalization is only one sub-factor within the four  
329 primary factors Moody's considers when assessing a company's credit rating.

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<sup>27</sup> See Standard & Poor's Ratings Direct, *Standard & Poor's Ratings Definitions*, June 22, 2012, at 6.

<sup>28</sup> See Direct Testimony of Rochelle M. Phipps, at 5-6. Note, Moody's Baa and A ratings are the equivalent of S&P's BBB and A ratings, respectively.

330 Because it is one of several metrics, the debt capitalization ratio is given a 7.50  
331 percent weighting factor in Moody's overall rating matrix.<sup>29</sup>

332 Moreover, Moody's reports debt capitalization benchmark ratios at the  
333 credit rating grade level (they are not reported at the more granular notch level)  
334 and there are two ranges, dependent on Moody's assessment of the subject  
335 company's business risk level ("standard" or "low business risk").<sup>30</sup>  
336 Consequently, even setting aside the fact that debt capitalization is not the sole  
337 factor determining credit ratings, it is not clear that Moody's rating methodology  
338 implies the precision between ratings levels and credit rating notches implied by  
339 Ms. Phipps' approach.

340 **Q. What is your response to Ms. Phipps' suggestion the Company has a target**  
341 **ratio for debt to total capital of** [REDACTED]

342 [REDACTED]

343 A. Ms. Phipps' suggestion appears to be based on her interpretation of a bullet point  
344 contained in an investor presentation on a page titled "Investment Focus". [REDACTED]

345 [REDACTED]

346 [REDACTED]

347 [REDACTED]

348 [REDACTED]

349 [REDACTED]

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<sup>29</sup> See Moody's Investor Service, *Rating Methodology: Regulated Electric and Gas Utilities*, December 23, 2013 at 2 and 24. The four factors are: (1) Regulatory Framework; (2) Ability to Recover Costs and Earn Returns; (3) Diversification; and (4) Financial Strength.

<sup>30</sup> *Ibid.*

350

351

352 **Q. Have you considered how adopting Ms. Phipps' capital structure would**  
353 **affect the Company's financial integrity?**

354 A. Yes, I have. Ms. Phipps' equity ratio recommendation of 43.51 percent is  
355 substantially below both Liberty Utilities' and APUC's current equity ratios. If the  
356 Commission were to adopt Staff's capital structure recommendation, it could  
357 place significant pressure on APUC's consolidated financial profile (which is the  
358 ultimate driver of both APUC's and LUC's credit ratings). S&P recently upgraded  
359 APUC and LUCo from BBB- (the lowest possible investment-grade rating) to  
360 BBB,<sup>31</sup> and DBRS currently rates APUC BBB (low) which is their lowest possible  
361 investment-grade rating.<sup>32</sup> Consequently, a one notch downgrade would place  
362 APUC at the lowest possible investment grade rating from S&P (*i.e.*, BBB-), and  
363 below investment grade from DBRS. Such a move could result in Liberty Utilities  
364 paying higher interest rates and cause investors to require a higher Cost of  
365 Equity for the Company.

366 **Q. Are there other metrics that can be considered in reviewing the**  
367 **reasonableness of Ms. Phipps' proposed cost rates and capital structure?**

368 A. Yes, there are. Pre-tax interest coverage, calculated as net income plus gross  
369 interest expense and total income taxes divided by gross interest expense,  
370 measures the extent to which operating earnings "cover" fixed capital obligations.

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<sup>31</sup> See, *Algonquin Power & Utilities Corp., Liberty Utilities Co., And Algonquin Power Co. Ratings Raised To 'BBB'*, Standard & Poor's Ratings Service, October 11, 2013, at 3.

<sup>32</sup> See, *Rating Report: Algonquin Power & Utilities*, DBRS, November 1, 2012, at 1.

371 Higher coverage ratios generally indicate higher levels of credit-worthiness.  
372 Based on Ms. Phipps' recommended 9.23 percent return on equity, 1.41 percent  
373 cost of short-term debt, 4.76 percent cost of long-term debt and capital structure,  
374 the implied coverage ratio is approximately 3.48 times. As demonstrated in  
375 Schedule 7.15, that level of coverage is significantly below the proxy group's 4.52  
376 median (4.50 mean) ratio.

377 **Q. Are there other reasons it is important for the Company to maintain an**  
378 **adequate capital structure?**

379 A. Yes, there are. An adequate capital structure is an important factor in  
380 maintaining access to financing. For utilities, which need to support large  
381 construction programs, consistent and reliable access to external capital is of  
382 paramount importance. As opposed to other industries, utilities do not have the  
383 option to avoid or defer many of their capital investments. As a practical matter,  
384 much of any utility capital investment program relates to replacement, is driven  
385 by reliability needs, or is mandated by law. In addition, many such capital  
386 investments (such as that related to replacement or reliability investments) do not  
387 directly generate incremental revenue or necessarily lower costs. Moreover,  
388 utilities must respond to external events such as storms, and their lack of  
389 geographic diversity can increase overall operating and business risk. Because  
390 internally generated funds cannot be relied on as the only source of financing,  
391 the maintenance of a credit profile that will enable capital access is extremely  
392 important.

393 **Q. Does Liberty Utilities' size affect its ability to raise capital?**

394 A. Yes, it does. In my practical experience, the market for debt associated with a  
395 company the size of Liberty Utilities is limited; the Company's issuances would  
396 likely be far lower than the \$100 million minimum threshold to be eligible to for  
397 the Moody's Utility Baa Bond Index.<sup>33</sup> Issuances that are not "index-eligible" have  
398 significantly less liquidity than larger debt issuances from more established (or  
399 "seasoned") issuers.<sup>34</sup> Consequently, smaller, privately-placed debt typically is  
400 more expensive and has more onerous loan covenants than larger, index-eligible  
401 issuances. In that regard, access to equity capital ultimately issued at APUC,  
402 and debt capital ultimately issued at LUC, affords the Company better access to  
403 capital and on more reasonable terms. The fact that Liberty Utilities does not  
404 issue its own debt and equity, however, does not indicate that its capital structure  
405 should be disregarded in favor of an imputed capital structure that falls well  
406 outside the bounds of industry practice.

407 **Q. Do you have any concerns with Ms. Phipps' inclusion of short-term debt in**  
408 **her recommended capital structure?**

409 A. Yes, I do. Ms. Phipps has ignored the typical financing cycle for utilities and  
410 included short-term debt that is related to gas inventories and receivables in the  
411 capital structure, rather than permanent (*i.e.*, rate base) assets. Natural gas  
412 distribution utilities in general, including Liberty Utilities, have a seasonal pattern

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<sup>33</sup> Source: Bloomberg Professional

<sup>34</sup> See, for example, 2011 CFA Level I Program Curriculum, Book 1, at 257. See also MarketWatch, *Smaller Issues in the U.S. Corporate Credit Market Offer Opportunities That Many Equity Investors May Miss*, July 9, 2014. See also TowersWatson, *Corporate Bond Liquidity Constrained*, September 2012.

413 to short-term debt balances, with the winter and shoulder periods typically  
414 requiring higher levels of short-term debt to finance supply inventories and gas  
415 sales receivables. In its December 2013 SEC Form 40-F filing, for example,  
416 Algonquin Power & Utilities Corporation described the seasonality of natural gas  
417 demand:

418 Natural gas demand is driven by the seasonal heating  
419 requirements of its residential, commercial, and industrial  
420 customers. That is, the colder the weather the greater the  
421 demand for natural gas to heat homes and businesses. As  
422 such, natural gas demand profiles typically crest in the winter  
423 months of January and February and decline in the summer  
424 months of July and August.<sup>35</sup>

425 The use of short-term funding facilities to finance seasonal requirements is not  
426 specific to Liberty Utilities; for example, Atmos Energy Corp. and Laclede Gas,  
427 both of which are included in my and Ms. Phipps' proxy groups, note a similar  
428 financing cycle:

429 Additionally, the seasonality of our business impacts our  
430 working capital differently at various times during the year.  
431 Typically, our accounts receivable, accounts payable and short-  
432 term debt balances peak by the end of January and then start to  
433 decline, as customers begin to pay their winter heating bills.  
434 Gas stored underground, particularly in our natural gas  
435 distribution segment, typically peaks in November and declines  
436 as we utilize storage gas to serve our customers.<sup>36</sup>

437 \*\*\*

438 The Company's short-term borrowing requirements typically  
439 peak during colder months when the Utility borrows money to  
440 cover the lag between when it purchases its natural gas and  
441 when its customers pay for that gas. Changes in the wholesale  
442 cost of natural gas, including cash payments for margin deposits

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<sup>35</sup> Algonquin Power & Utilities Corporation, SEC Form 40-F, for the fiscal year end December 31, 2013, at 70.

<sup>36</sup> Atmos Energy Corporation, SEC Form 10-K, for the fiscal year ended September 31, 2013, at 31.

443 associated with the Utility's use of natural gas derivative  
444 instruments, variations in the timing of collections of gas cost  
445 under the Utility's PGA Clause, the seasonality of accounts  
446 receivable balances, and the utilization of storage gas  
447 inventories cause short-term cash requirements to vary during  
448 the year and from year to year, and may cause significant  
449 variations in the Company's cash provided by or used in  
450 operating activities.<sup>37</sup>

451 By including short-term debt that is used to finance current assets in the  
452 capital structure, Ms. Phipps has overstated the level of short-term debt required  
453 to finance utility operations. To that point, Ms. Phipps' Schedule 3.03 shows the  
454 Company only had net outstanding short-term debt at the end of three winter and  
455 shoulder months (December, January and February).

456 **Q. Do you have any observations regarding Mr. Knepler's interest rate**  
457 **synchronization recommendation.**

458 A. Yes, I do. As Mr. Krygier points out, Mr. Knepler's recommendation is based on  
459 a hypothetical capital structure that includes an unduly high degree of debt  
460 leverage. Consequently, I disagree with the basis of Mr. Knepler's  
461 recommendation.

462 ***Cost of Debt***

463 **Q. Has the cost of debt for Liberty Utilities' been updated?**

464 A. Yes, it has. As detailed in the revised Schedule D-1, the Company's cost of debt  
465 has been revised to 4.43 percent (from 4.78 percent).

466 **Q. Please summarize Ms. Phipps' position regarding the cost of debt.**

467 A. Ms. Phipps recommends the use of LUC's consolidated cost of debt under the

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<sup>37</sup> Laclede Gas, SEC Form 10-K, for the fiscal year ended September 31, 2013, at 38.

468 assumption LUC's cost of debt reflects "market-determined" interest rates.<sup>38</sup> Ms.  
469 Phipps calculates a cost of debt of 4.76 percent based on the stated interest  
470 rates reported in APUC's most recent Form 40-F filed with the Securities and  
471 Exchange Commission and other data provided by the company in response to  
472 data requests.<sup>39</sup>

473 **Q. Do you agree with Ms. Phipps imputation of LUC's cost of debt to Liberty**  
474 **Utilities?**

475 A. No, I do not. While I recognize Ms. Phipps' is recommending a higher cost of  
476 debt based on data from Algonquin Power & Utilities Corporations Form 40-F, for  
477 the fiscal year ended December 31, 2013, I believe the authorized cost of debt  
478 should reflect Liberty Utilities' somewhat lower embedded cost of debt, which is  
479 4.43 percent.<sup>40</sup> That cost rate is reasonable and appropriate compared to the  
480 mean embedded cost of debt for natural gas utilities in calendar year 2013.<sup>41</sup>  
481 While I do not agree with Ms. Phipps' recommendation to impute a consolidated  
482 cost of debt to Liberty Utilities, I also note that Ms. Phipps' cost of debt  
483 calculations exclude debt issuance expenses and thus would understate the  
484 effective cost of debt.<sup>42</sup>

485 ***Application of the Multi-Stage DCF Analysis***

486 **Q. Please summarize Ms. Phipps' Multi-Stage Discounted Cash Flow analyses.**

487 A. Ms. Phipps relies on the Multi-Stage DCF methodology and data presented in my

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<sup>38</sup> See Direct Testimony of Rochelle M. Phipps, at 6.

<sup>39</sup> *Ibid.*, at 9-10.

<sup>40</sup> See Revised Schedule D-1, filed May 13, 2014.

<sup>41</sup> See Direct Testimony of Robert B. Hevert, at 55.

<sup>42</sup> See Direct Testimony of Rochelle M. Phipps, Schedule 3.04.

488 Direct Testimony, but modifies three underlying inputs to the model. In particular,  
489 Ms. Phipps: (1) excludes the “sv” component of the sustainable growth formula;  
490 (2) assumes the proxy companies’ payout ratios will remain constant at Value  
491 Line’s 2016 – 2018 forecasted levels; and (3) uses a different estimate of long-  
492 term growth.

493 **Q. Please briefly describe the Retention Growth calculation presented in your**  
494 **Direct Testimony.**

495 A. As discussed in my Direct Testimony, the Retention Growth estimate applied in  
496 my Multi-Stage DCF analyses allows for earnings growth through reinvested  
497 earnings as well as earnings growth funded through external equity.<sup>43</sup> Growth  
498 through reinvested earnings is modeled as the product of the retention ratio and  
499 the expected return on book equity. Growth through external equity is modeled  
500 as the incremental value accruing to existing shareholders’ book equity when  
501 there is growth in the common shares outstanding and equity is issued at a  
502 market value above book value. The Retention Growth formula can be  
503 expressed as:

$$\text{Retention Growth} = br + sv$$

504 where:

505 b = retention ratio;

506 r = earned return on book equity;

507 s = growth rate of common shares x (market / book ratio); and

508 v =  $1 - (1 / (\text{market} / \text{book ratio}))$ .

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<sup>43</sup> See Direct Testimony of Robert B. Hevert, at 21-22.

510 **Q. Why does Ms. Phipps' exclude the "sv" component of the Retention**  
511 **Growth model from the growth rate applied in her DCF analysis?**

512 A. Ms. Phipps explains she excludes the "sv" component of the Retention Growth  
513 model, which is premised on companies raising external equity at the market  
514 price, because she believes Value Line forecasts no new common equity share  
515 issuances for the proxy companies.<sup>44</sup>

516 **Q. Do you agree with Ms. Phipps' assessment?**

517 A. I agree with Ms. Phipps that the "sv" component of the Retention Growth model  
518 should be zero when no future equity issuances are expected. To that point, as  
519 shown in Schedule 4.2, I estimated a "sv" component of zero for the three proxy  
520 companies Value Line projects to have no growth in shares outstanding.  
521 However, Ms. Phipps' assertion that Value Line does not forecast new common  
522 equity share issuances for any of the proxy companies is incorrect. The  
523 Retention Growth calculation presented in Schedule 4.2 (and updated in  
524 Schedule 7.2) shows Value Line projects six out of nine proxy companies to  
525 increase their common shares outstanding from 2014 through the 2016 – 2018  
526 forecast period. Consequently, it would have been appropriate for Ms. Phipps to  
527 include the "sv" component of the Retention Growth model.

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<sup>44</sup> See Direct Testimony of Rochelle M. Phipps, at 13.

528 **Q. Do you agree with Ms. Phipps' assumption that dividend payout ratios will**  
529 **remain constant in perpetuity as of Value Line's 2016–2018 forecast**  
530 **period?**

531 A. No, I do not. As discussed in my Direct Testimony,<sup>45</sup> one of the primary  
532 advantages of the Multi-Stage DCF model is that it allows for flexibility in  
533 adjusting the dividend payout ratio and growth rates estimates over time to reflect  
534 investor expectations over changing capital investment cycles. While Value Line  
535 projected the proxy group's payout ratio will decline from recent levels to an  
536 average of 55.89 percent in the 2016-2018 forecast period,<sup>46</sup> Ms. Phipps has  
537 provided no evidence that would indicate utilities are expected to deviate from  
538 historical allocation and financing practices over the long-term. It is unclear why  
539 Ms. Phipps would find it reasonable to rely on an expected payout ratio that may  
540 be influenced by transient investment cycles rather than a longer-term average  
541 that reflects a variety of economic conditions.

542 **Q. How did Ms. Phipps develop her terminal growth rate?**

543 A. Ms. Phipps' estimate of long-term growth is based on a projection of real GDP  
544 growth from both the Energy Information Administration ("EIA") and Global  
545 Insight of 2.40 percent, together with an expected inflation rate of 2.30 percent,  
546 which represents the compound annual difference in the yields on U.S. Treasury  
547 bonds and U.S. Treasury Inflation Protected Securities.<sup>47</sup> The combination of her  
548 estimates of real growth and expected inflation produce an expected nominal

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<sup>45</sup> See Direct Testimony of Robert B. Hevert, at 18-19.

<sup>46</sup> *Ibid.*, Schedule 4.1.

<sup>47</sup> See Direct Testimony of Rochelle M. Phipps, at 17-18.

549 GDP growth rate (that is the expected growth rate as of the beginning of the  
550 terminal period) of 4.76 percent. Ms. Phipps also considers the average nominal  
551 GDP growth rate forecast by EIA and Global Insight of 4.38 percent,<sup>48</sup> in arriving  
552 at her long-term growth estimate of 4.57 percent.<sup>49</sup>

553 **Q. Please briefly described the method by which Ms. Phipps arrives at her**  
554 **2.30 percent expected inflation rate.**

555 A. Consistent with the approach used in my Direct Testimony, Ms. Phipps measures  
556 expected inflation as the compound annual difference between nominal Treasury  
557 yields and the Treasury Inflation Protected Securities (“TIPS”) yield (sometimes  
558 referred to as the TIPS spread).<sup>50</sup> Specifically, Ms. Phipps relies on the 30-day  
559 average of ten and 30-year nominal Treasury yields and TIPS yields to develop  
560 the implied 20-year expected inflation rate at the terminal growth stage of her  
561 Multi-Stage DCF analyses (*i.e.*, ten years hence). Ms. Phipps’ inflation estimate  
562 of 2.30 percent is generally consistent with the 2.37 percent inflation estimate I  
563 relied on in my Direct Testimony.<sup>51</sup>

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<sup>48</sup> *Ibid.*, at 19. EIA forecasted 4.41 percent growth from 2024-2040 and Global Insights forecast 4.36 percent growth for from 2024-2043.

<sup>49</sup> *Ibid.*, at 19.

<sup>50</sup> *Ibid.*, at 17-18.

<sup>51</sup> While nominal return is often calculated as the simple addition of real return and inflation for expediency (*see*, for example, 2011 CFA Level I Program Curriculum, Book 1 at 257; and Morningstar, SBBI 2013 Valuation Yearbook at 52), I agree with Ms. Phipps’ assessment that the more precise estimate of inflation requires a compound return calculation (*see*, Direct Testimony of Rochelle M. Phipps, at 18, footnote 35). Accordingly, the inflation estimate used in the analyses accompanying my Rebuttal Testimony is calculated using the compound method. The difference between the two methods is 3 basis points.

564 **Q. Have you performed any analysis to assess the reasonableness of Ms.**  
565 **Phipps' 4.57 percent nominal long-term GDP growth estimate?**

566 A. Yes, I have. While Ms. Phipps develops her nominal GDP growth estimate using  
567 real GDP growth estimates that end from 26 to 30 years from now, it is important  
568 to remember the long-term growth rate used in the DCF model is a perpetual  
569 growth rate extending indefinitely.<sup>52</sup> With respect to nominal GDP growth, I note  
570 that the long-term geometric average from 1929 to 2013 was 6.23 percent, and  
571 the arithmetic average was 6.47 percent.<sup>53</sup> Those observed growth rates are as  
572 much as 190 basis points above the 4.57 percent projection on which Ms. Phipps  
573 relies as a measure of long-term expected growth.

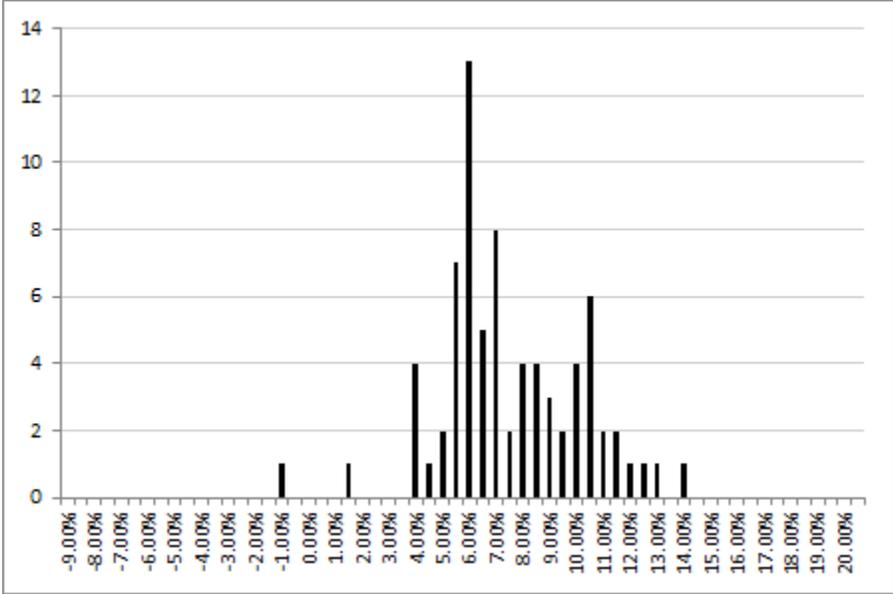
574 Since the nominal long-term GDP growth is applied beginning in year ten  
575 of Ms. Phipps' Multi-Stage DCF model, I calculated the average ten year annual  
576 growth rates over the 1929 to 2013 period. I then arranged that data in  
577 histograms to provide a perspective of how frequently various levels of growth  
578 have occurred. As Chart 2 demonstrates, average annual growth as low as 4.57  
579 percent has been observed very infrequently; when measured over ten year  
580 periods, average annual growth exceeded 4.57 percent in 68 of 75 periods. To  
581 provide another perspective, I also calculated average GDP growth over five year  
582 periods. In that case, average annual GDP growth rate was greater than 4.57  
583 percent in 70 of 80 periods (see Chart 3).

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<sup>52</sup> Direct Testimony of Ms. Rochelle M. Phipps, at 17.  
<sup>53</sup> Source: Bureau of Economic Analysis.

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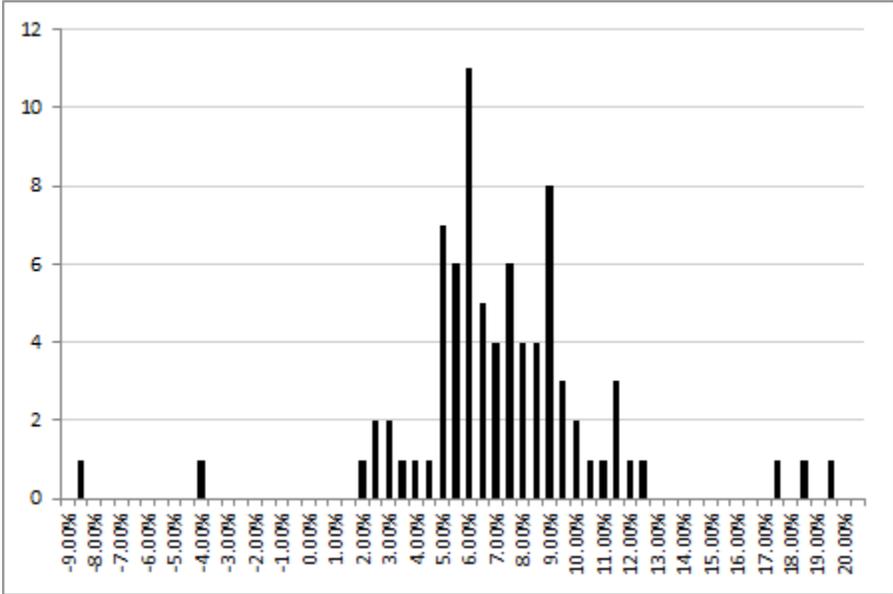
**Chart 2: Average Annual GDP Growth Measured over Ten-Year Periods**<sup>54</sup>



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**Chart 3: Average Annual GDP Growth Measured over Five-Year Periods**<sup>55</sup>



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**Q. Are there other benchmarks that may help put that growth rate in context?**

589

**A. Yes, there are. For example, Ms. Phipps' long-term growth estimate is below the**

<sup>54</sup> Source: Bureau of Economic Analysis.  
<sup>55</sup> Source: Bureau of Economic Analysis.

590 range of mature company growth estimates provided by Eugene F. Brigham and  
591 Michael C. Ehrhardt in Financial Management: Theory and Practice:

592 Expected growth rates vary somewhat among companies, but  
593 dividend growth for most mature firms is generally expected to  
594 continue in the future at about the same rate as nominal gross  
595 domestic product (real GDP plus inflation). On that basis, one  
596 might expect the dividends of an average, or “normal,” company  
597 to growth at a rate of 5% to 8% a year.<sup>56</sup>

598 **Q. Is there another approach to calculating the long-term growth rate that**  
599 **produces more reasonable results?**

600 A. Yes, there is. As noted in my Direct Testimony, it is possible to combine  
601 expected inflation with average historical real GDP growth.<sup>57</sup> According to data  
602 provided by the Bureau of Economic Analysis, over the period 1929 to 2013 the  
603 average annual real GDP growth rate was 3.27 percent. Combining real GDP  
604 growth with the expected inflation rate of 2.37 percent used in my Direct  
605 Testimony produces an expected long-term growth rate of 5.72 percent (revised  
606 to 5.71 percent in my Rebuttal Testimony).<sup>58</sup>

607 **Q. Is it reasonable to assume future real GDP growth will reflect historical real**  
608 **GDP growth?**

609 A. Yes, it is. As shown in Chart 4 (below), but for the recent “great recession” and  
610 the continued slow economic recovery, real GDP growth since the post-World  
611 War II era has been cyclical, but maintained a relatively steady mean reversion  
612 level close to the long-term historical average of 3.27 percent.

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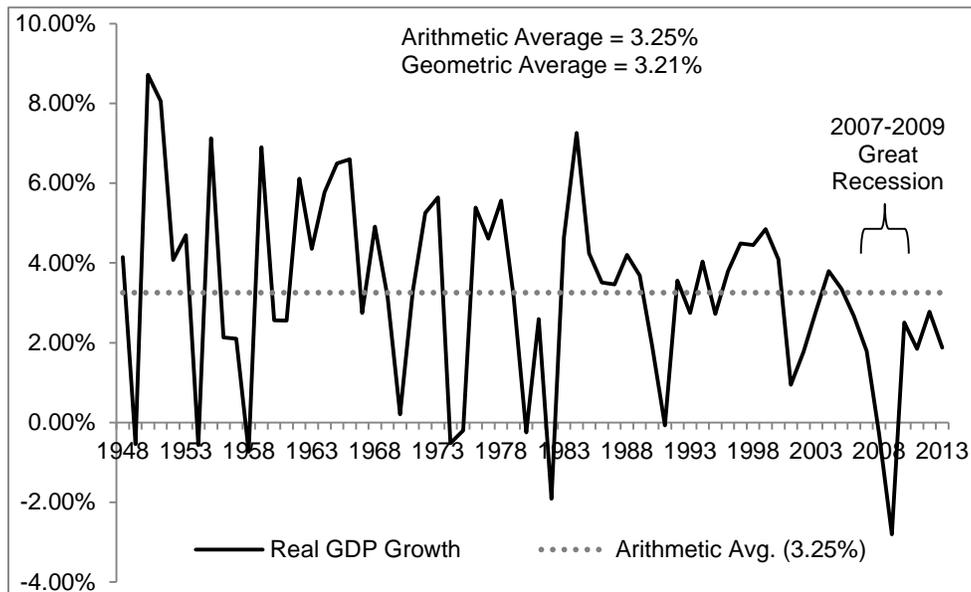
<sup>56</sup> Eugene Brigham and Michael Ehrhardt, Financial Management: Theory and Practice, 12th Ed. (Mason, OH: South-Western Cengage Learning, 2008), at 291.

<sup>57</sup> Direct Testimony of Robert B. Hevert, at 23.

<sup>58</sup>  $3.27\% \times 2.37\% = 5.72\%$ .

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**Chart 4: Real GDP Growth Mean Reversion (1948 to 2013)<sup>59</sup>**



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Since 1948, annual real GDP growth rates have been above the long-term 3.27 percent geometric average more than half of the time (35 of 66 years). As noted above, Ms. Phipps relies on a long-term real GDP growth rate estimate of 2.40 percent.<sup>60</sup> It is interesting to note that annual real GDP growth has been at or above 2.40 percent more than 70.00 percent of the time since 1948 (47 of 66 years). In fact, of the 19 years with 2.40 percent real growth or less, five have been during or following the recent “great recession.” Ms. Phipps, however, has provided no rationale to explain her assumed decline of more than 80 basis points in the structural growth potential of the economy over the long-term.

<sup>59</sup> Source: Bureau of Economic Analysis.  
<sup>60</sup> See Direct Testimony of Rochelle M. Phipps, at 17.

624 **Q. Ms. Phipps also suggests that your long-term growth estimate is**  
625 **unreasonable because it implies a return on common equity of 18.72**  
626 **percent.<sup>61</sup> What is your response to Ms. Phipps on that point?**

627 A. As a preliminary matter, Ms. Phipps' does not reconcile her recommendation of  
628 9.23 percent with the Value Line Return on Equity benchmarks she cites; "Value  
629 Line's projected 11.17% ROE for the proxy group" and the 2002 to 2013 average  
630 ROE of 11.00 percent for the proxy group.<sup>62</sup> In addition, Ms. Phipps' assertion is  
631 premised on the "b times r" approach to estimating growth, which assumes that  
632 internal growth is defined as the product of the retention ratio (b) and the earned  
633 return on common equity (r). As discussed above, that approach does not  
634 account for growth associated with new equity issuances. Further, Ms. Phipps'  
635 observation only holds if the strict assumptions underlying the Constant Growth  
636 DCF model are met. That is, the Constant Growth model assumes that  
637 dividends, earnings and book value grow at the same, constant rate in perpetuity,  
638 and that the payout ratio and Price/Earnings ratios also remain constant (again,  
639 in perpetuity). The possibility that those assumptions will not hold true in the  
640 intermediate future is the reason I have relied on the Multi-Stage DCF model in  
641 this proceeding.

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<sup>61</sup> *Ibid.*, at 14-15.

<sup>62</sup> *Ibid.*, at 14.

642 ***Application of the Capital Asset Pricing Model***

643 **Q. Please summarize Ms. Phipps' inputs to her CAPM analysis, and the results**  
644 **from that analysis.**

645 A. Ms. Phipps' CAPM estimate is based on a risk-free rate of 3.81 percent, a market  
646 return estimate of 12.15 percent, and an average Beta coefficient of 0.69. Based  
647 on those assumptions, Ms. Phipps arrives at a cost of equity estimate of 9.56  
648 percent.<sup>63</sup>

649 **Q. Are there similarities between your CAPM analysis and Ms. Phipps'**  
650 **analysis?**

651 A. Yes, there are. Ms. Phipps and I agree on the general construct of the CAPM  
652 whereby a risk premium is added to a risk-free rate to determine the required rate  
653 of return. We agree that the 30-year U.S. Treasury bond is the appropriate risk-  
654 free rate, and that the risk premium is calculated by multiplying the proxy group's  
655 average Beta coefficient by the overall market risk premium. Ms. Phipps and I  
656 also agree on the use of a prospective or *ex-ante* market risk premium, rather  
657 than a historical or *ex-post* risk premium.

658 **Q. Does Ms. Phipps' note any objections to your CAPM analyses?**

659 A. Yes, Ms. Phipps expresses concern with (1) the use of a forward-looking risk-free  
660 rate; (2) the time horizon of the Beta coefficients used in my alternate CAPM  
661 analyses; and (3) the calculation of the expected return on the overall market,  
662 which is used to determine the *ex-ante* market risk premium, in my alternate  
663 CAPM; and (4) the timing of the market data used to calculate the MRP

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<sup>63</sup> *Ibid.*, at 24, 26.

664 component of the CAPM.

665 **Q. What risk-free rate assumptions did you include in your CAPM analyses?**

666 A. I considered both the 30-day average of the 30-year Treasury yield and Blue  
667 Chip Financial Forecasts' ("Blue Chip") near-term projected 30-year Treasury  
668 yield.

669 **Q. What is Ms. Phipps' concern regarding the near-term risk-free rate used in  
670 your CAPM analyses?**

671 A. Ms. Phipps asserts that the current 30-year Treasury yield reflects "all relevant,  
672 available information, including investor expectations regarding future interest  
673 rates"<sup>64</sup> and therefore "speculation" regarding whether investors' consider  
674 forecasts from a particular forecast service is unnecessary.

675 **Q. What is your response to Ms. Phipps' concern regarding the near-term risk-  
676 free rate used in your CAPM analyses?**

677 A. Ms. Phipps' suggestion that all relevant information is captured in current  
678 Treasury bond yields may be an over simplification of investor expectations and  
679 the market forces influencing current interest rates. For example, Ms. Phipps  
680 calculates an implied 20-year forward U.S. Treasury yield in ten years of 4.27  
681 percent as part of her calculation of expected inflation using the TIPS spread;  
682 that estimate is 71 basis points above the 3.56 percent 30-day average 20-year  
683 Treasury yield as of the same date). That calculation clearly shows an  
684 expectation of rising interest rates. Blue Chip's near-term forecast of the 30-year  
685 Treasury yield, which is the consensus projection of over fifty business

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<sup>64</sup> *Ibid.*, at 22.

686 economists for the average 30-year U.S. Treasury yield in the coming six  
687 quarters, also indicates investors expect interest rates to rise.

688 Expectations for rising interest rates are not surprising given the ongoing  
689 tapering of the Federal Reserve's Quantitative Easing program (which was  
690 intended to lower long-term rates) that started in December 2013.<sup>65</sup>  
691 Consequently, I continue to believe it is appropriate to consider both current and  
692 projected 30-year Treasury yields when estimating the risk-free rate component  
693 of the CAPM.

694 **Q. How does Ms. Phipps derive the Beta coefficients for her CAPM analysis?**

695 A. Ms. Phipps' uses five Beta coefficients calculated using five-years of returns:

- 696 (1) Value Line's Beta coefficients (weekly returns, regressed against the  
697 NYSE);
- 698 (2) The regression calculation included in my Direct Testimony (monthly  
699 returns, regressed against the S&P 500);
- 700 (3) Staff's regression calculation (monthly returns, regressed against the  
701 NYSE);
- 702 (4) Zacks' Beta coefficients, which are unadjusted Beta coefficients that  
703 Ms. Phipps adjusts (monthly returns, regressed against the S&P 500);
- 704 (5) Bloomberg's five-year calculated Beta coefficients (monthly returns,  
705 regressed against the S&P 500).

706 Ms. Phipps calculates her 0.69 Beta coefficient estimate by averaging together  
707 the four Beta coefficients calculated using monthly returns, and then averaging

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<sup>65</sup> See Direct Testimony of Robert B. Hevert, at 48-49.

708 the result with the Value Line weekly return Beta coefficient.

709 **Q. How does Ms. Phipps calculate her regression Beta coefficient?**

710 A. Ms. Phipps calculates her own Beta coefficient using three steps:

711 (1) The U.S. Treasury bill return is subtracted from both the average  
712 percentage change in the sample's stock prices and the percentage  
713 change in the NYSE Index to estimate each portfolio's return in excess  
714 of the risk-free rate;

715 (2) The excess returns of the sample are regressed against the excess  
716 returns of the NYSE Index to estimate the raw Beta coefficient, using  
717 60 monthly observations of stock and Treasury bill return data; and

718 (3) The Beta is adjusted by multiplying the raw Beta coefficient by 0.66257  
719 and adding 0.33743.<sup>66</sup>

720 **Q. What is Ms. Phipps' concern with the Beta coefficients used in your CAPM**  
721 **analyses?**

722 A. Ms. Phipps' CAPM analysis includes the two five-year Beta coefficients used in  
723 my primary CAPM analyses. However, Ms. Phipps believes the 18-month  
724 regression Beta coefficient and the two-year Bloomberg Beta coefficient included  
725 in my alternate CAPM analyses are calculated over too short of a time period to  
726 be reliable and are "more prone to measurement error arising from short-term  
727 changes in risk and investor risk preferences".<sup>67</sup>

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<sup>66</sup> See Direct Testimony of Rochelle M. Phipps, at 25.

<sup>67</sup> *Ibid.*, at 27-28.

728 **Q. Why do you disagree with Ms. Phipps' sole reliance on five-year Beta**  
729 **coefficients?**

730 A. While my primary analyses reflect the Commission's stated preference for Beta  
731 coefficients calculated over five-years, I also believe it is important to consider  
732 Beta coefficient estimates that reflect current and expected levels of systematic  
733 risk.<sup>68</sup> As stated in my Direct Testimony, I used an 18-month calculated Beta  
734 coefficient (in addition to the 24-month Beta coefficient calculated by Bloomberg)  
735 to provide a more current view as to investors' perspectives with respect to the  
736 systematic risk represented by the proxy companies.<sup>69</sup>

737 **Q. Is a five-year period required to estimate a company's Beta coefficient?**

738 A. No, it is not. While Beta coefficients are generally developed using historical  
739 data, they are meant to be forward-looking estimates that reflect investors'  
740 expectations for a company's systematic risk. Duff & Phelps 2014 Valuation  
741 Handbook explains Beta is a forward-looking concept and notes:

742 Research shows that betas are time-varying (i.e., sensitive to  
743 market changes as the economy changes; betas differ during  
744 improving economic conditions compared with periods when  
745 economic conditions are declining). Using a historical method  
746 based on a sample period may not provide a reliable indication  
747 of expected beta when economic conditions are changing. The  
748 current and expected future economic conditions may differ  
749 from the economic conditions during the look-back period.  
750 Therefore, the beta estimated using the data for the look-back  
751 period may not reflect the future.<sup>70</sup>

752 I note that financial data services such as Bloomberg enable analysts to

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<sup>68</sup> See Direct Testimony of Robert B. Hevert, at 26-27 and 30-31.

<sup>69</sup> *Ibid.*, at 30-31.

<sup>70</sup> Duff & Phelps, 2014 Valuation Handbook, at 2-11.

753 specify the analytical period (e.g., six, twelve, twenty-four, sixty months), the  
754 holding period (e.g., daily, weekly, monthly), and the index (e.g., S&P 500, Dow  
755 Industrial, NYSE Composite Index) used to calculate Beta coefficients. It is  
756 clear, therefore, that Bloomberg recognizes that analysts and investors alike  
757 consider the nature of the current market environment, determine when the  
758 default calculations published by standard sources such as Value Line are less  
759 relevant than alternative specifications, and develop Beta coefficients in a more  
760 meaningful manner when appropriate. The calculation of Beta coefficients based  
761 on more current data therefore is consistent with the actual practice of analysts  
762 and investors and is analogous to the use of current stock prices in the DCF  
763 model.

764 **Q. Does Ms. Phipps make any other observations regarding the use of Beta**  
765 **coefficients calculated over shorter time periods?**

766 A. Yes. Ms. Phipps notes it is preferable to calculate the Beta coefficient using data  
767 that covers a full business cycle including rising and falling markets, and  
768 suggests “Betas measured over shorter time periods are more prone to  
769 measurement error arising from short-term changes in risk and investor risk  
770 preferences.”<sup>71</sup>

771 **Q. Do the Beta coefficient estimates Ms. Phipps relies on cover a full business**  
772 **cycle?**

773 A. No, they do not. Ms. Phipps’ estimates are generally calculated over the 2009-  
774 2013 period. However, according to the National Bureau of Economic Research

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<sup>71</sup> Direct Testimony of Rochelle M. Phipps, at 27-28.

775 (“NBER”), we have not yet reached the corresponding peak following the last  
776 business cycle trough, which occurred in June 2009.<sup>72</sup> Ms. Phipps’ Beta  
777 coefficients are, therefore, primarily calculated over a nearly five-year long  
778 economic recovery phase.

779 **Q. What is your response to Ms. Phipps’ position that a decrease in a**  
780 **company’s systematic risk could increase its Beta coefficient and,**  
781 **conversely, an increase in systematic risk could decrease its calculated**  
782 **Beta coefficient?**<sup>73</sup>

783 A. Ms. Phipps seems to draw a distinction between “systematic risk” and Beta  
784 coefficients when (as explained in my Direct Testimony) they are one and the  
785 same.<sup>74</sup> Systematic, or “non-diversifiable” risk, is a fundamental component of  
786 Modern Portfolio Theory, the central theme of which is that rational investors  
787 make investment decisions reflecting the inherent aversion to taking on additional  
788 risk without being compensated by additional returns. In the context of Modern  
789 Portfolio Theory, risk is defined as the uncertainty, or variability, of returns.  
790 Modern Portfolio Theory was advanced by recognizing that total risk can be  
791 separated into two distinct components: (1) systematic or non-diversifiable risk,  
792 which is that portion of risk that can be attributed to the market as a whole; and  
793 (2) non-systematic (or diversifiable) risk, which is attributable to the subject  
794 company, itself. Because non-systematic risk can be diversified away by adding

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<sup>72</sup> Source: National Bureau of Economic Research, *U.S. Business Cycle Expansions and Contractions*, available at <http://www.nber.org/cycles.html>.

<sup>73</sup> See Direct Testimony of Rochelle M. Phipps, at 28.

<sup>74</sup> See Direct Testimony of Robert B. Hevert, at 25.

795 more securities to their portfolio, investors should be concerned only with non-  
796 diversifiable (systematic) risk. In the context of the CAPM, it is systematic risk  
797 (measured by the Beta coefficient) that determines the Cost of Equity.

798 As also noted in my Direct Testimony, the Beta coefficient is a function of  
799 the volatility of the subject company's returns relative to that of the overall  
800 market, and the correlation between the subject company's returns and the  
801 overall market's returns.<sup>75</sup>

$$\beta_j = \frac{\sigma_j}{\sigma_m} \times \rho_{j,m} \quad [1]$$

802 Although Ms. Phipps argues that a decrease in systematic risk may increase the  
803 Beta coefficient, she does not explain which element of Equation [1] would have  
804 to decline for that to occur. If, for example, the subject company's volatility  
805 decreased less than the overall market's return, that change would increase the  
806 Beta coefficient, assuming that the correlation coefficient remains constant. At  
807 the same time, relative risk (that is, the ratio of the subject company's return  
808 volatility relative to the market's return volatility) is an important element of the  
809 Beta coefficient and it is not clear how one element (company-specific volatility)  
810 could constitute the entirety of "systematic risk".  
811

812 In any event, looking at Beta coefficients over differing periods, as I have  
813 done, is entirely consistent with industry practice and provides additional  
814 information and perspective that should not be disregarded.

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<sup>75</sup> *Ibid.*

815 **Q. What is your response to Ms. Phipps' concern regarding the measurement**  
816 **error that may arise from shorter-term Beta coefficient calculations?**

817 A. Mr. Phipps' concern about statistical relevance overlooks the fact that my 18-  
818 month Beta coefficient relies on more observations than at least two of her  
819 estimates. Whereas Ms. Phipps' regression Beta and Zacks' Beta coefficients  
820 compare the monthly returns of a given company relative to a market index (*i.e.*,  
821 five years result in 60 observations), I compare the monthly returns of the subject  
822 company to the S&P 500 on a daily basis (*i.e.*, the monthly returns for each  
823 trading day in the 18 months, which results in 379 trading days). In calculating  
824 the Beta coefficients, I performed a regression analysis using the proxy  
825 companies' monthly returns on a daily basis as the dependent variable, and the  
826 same measure of returns for the S&P 500 as the independent variable. The t-  
827 statistics for each company indicate that the independent variable is statistically  
828 significant.<sup>76</sup>

829 It is interesting to note that the table on page 29 of Ms. Phipps' direct  
830 testimony does not indicate measurement error as Ms. Phipps' claims, but rather  
831 suggests the systematic risk of the proxy group increased over the 2009-2014  
832 period. This makes intuitive sense as utilities' appeared relatively stable during  
833 the height of the market's elevated volatility during the 2007-2009 financial crisis,  
834 but have reverted toward a more normal systematic risk level as the economic  
835 recovery continues (and perhaps even faced relatively elevated risk compared to  
836 the overall market as interest rates rose sharply during the second half of 2013).

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<sup>76</sup> See Schedule 7.16.

837 **Q. What is the primary disagreement between you and Ms. Phipps' regarding**  
838 **the methodology for estimating the forward-looking MRP?**

839 A. While Ms. Phipps and I agree that it is important to use forward-looking market  
840 risk premia rather than historical risk premia in the CAPM, and that the DCF  
841 model is a reasonable means of calculating the expected market return, we  
842 disagree as to the appropriate methodology to estimate the expected return for  
843 the overall market, which is used to derive the MRP. Specifically, Ms. Phipps  
844 begins with the companies in the S&P 500 and excludes those companies that  
845 do not pay dividends.<sup>77</sup> As discussed in my Direct Testimony, I also performed a  
846 set of CAPM analyses using a market return estimate that only includes dividend  
847 paying companies in the calculation.<sup>78</sup> However, I also reviewed an alternate set  
848 of CAPM analyses that included both dividend and non-dividend paying  
849 companies in the market return calculation.<sup>79</sup>

850 **Q. Does Ms. Phipps accept the methodology used in your alternate CAPM?**

851 A. No, Ms. Phipps believes "including non-dividend paying companies in a DCF  
852 analysis of the market overstates the resulting estimated required rate of return  
853 on the market."<sup>80</sup> In my view, the purpose of that analysis is to estimate the  
854 expected return for the overall market. As such, it is appropriate to include as  
855 many companies as possible for which growth rate estimates are available,  
856 whether or not the company pays dividends. By doing so, it is possible to gauge

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<sup>77</sup> See Direct Testimony of Rochelle M. Phipps, at 24.  
<sup>78</sup> See Direct Testimony of Robert B. Hevert, at 26-27.  
<sup>79</sup> *Ibid.*, at 31-32.  
<sup>80</sup> Direct Testimony of Rochelle M. Phipps, at 30.

857 equity investors' return expectations for the entire universe of large-capitalization  
858 companies. Moreover, from a practical standpoint, the return to investors comes  
859 in the form of dividends and/or price appreciation. The salient issue is to properly  
860 estimate what investors expect their return would be from investing in the overall  
861 market. In that regard, it makes no difference whether or not a given company  
862 pays dividends.

863 In addition, as discussed in my Direct Testimony, excluding non-dividend  
864 paying companies from the MRP calculation creates an internal inconsistency in  
865 the application of the CAPM because the Beta coefficients Ms. Phipps and I use  
866 are measured against the returns on market proxies that include non-dividend  
867 paying companies.<sup>81</sup> As the premise of the CAPM is that required return is  
868 related to the relative risk of an investment, it is important for both risk and  
869 required return to be measured consistently.

870 **Q. Have you performed any analysis in order to check the reasonableness of**  
871 **your Bloomberg and Value Line DCF-derived Market Risk Premia?**

872 A. Yes, I did. Because Ms. Phipps concludes that the MRP estimates used in my  
873 analyses "overstate" the implied MRP,<sup>82</sup> it is instructive to understand how often  
874 various ranges of MRPs actually occurred over the 1926 to 2013 period. To  
875 perform that analysis, I gathered the annual Market Risk Premia reported by  
876 Morningstar and produced a histogram of the observations. The results of that  
877 analysis, which are presented in Chart 5 (below), demonstrate that MRPs of at

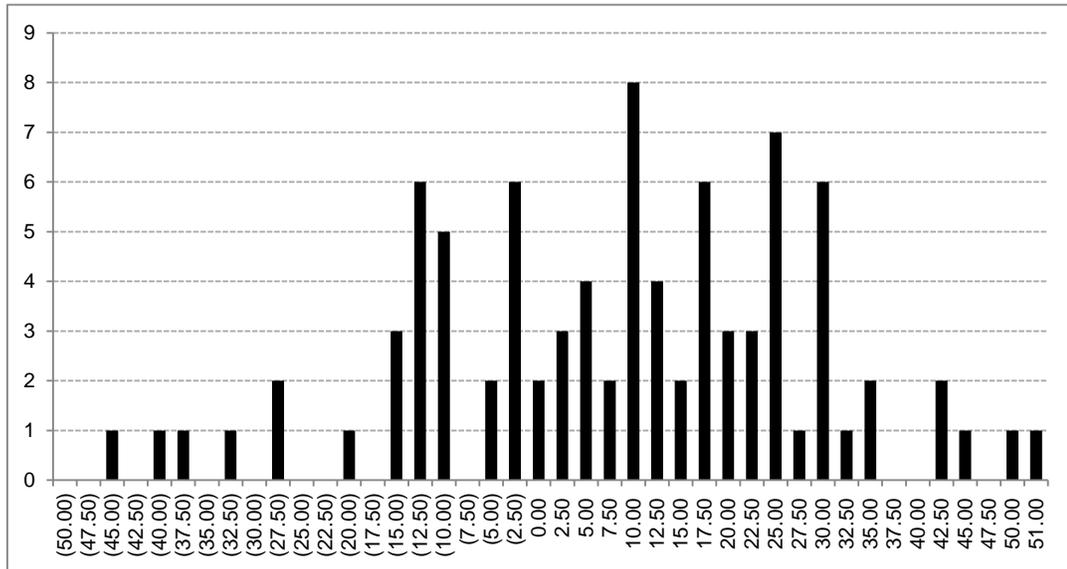
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<sup>81</sup> See Direct Testimony of Robert B. Hevert, at 31.

<sup>82</sup> Direct Testimony of Rochelle M. Phipps, at 30.

878 least 10.32 percent (the high end of the range of MRP estimates in my Direct  
879 Testimony) have occurred nearly half of the time.

880 **Chart 5: Frequency Distribution of Market Risk Premia, 1926 - 2013<sup>83</sup>**

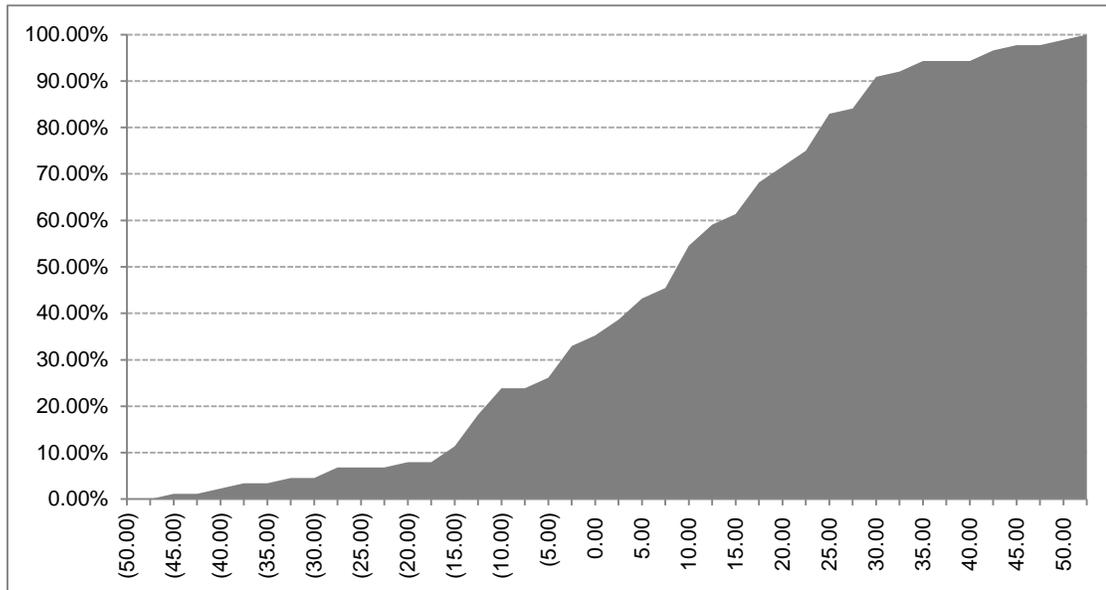


881  
882 I then considered a different perspective, calculating the cumulative  
883 probability of the same ranges of MRP estimates. Those results, which are  
884 provided in Chart 6 (below) demonstrate that an MRP of at least 10.32 percent  
885 will occur approximately half of the time.

<sup>83</sup> Source: Morningstar, Inc., Ibbotson Stocks, Bonds, Bills and Inflation 2014 Classic Yearbook, at 196-197.

886

**Chart 6: Cumulative Probability of Market Risk Premia, 1926 - 2013<sup>84</sup>**



887

888

889

**Q. Was your market return estimate performed on a different date than the estimate of your risk-free rate and Beta coefficient estimate, as Ms. Phipps claims?**

890

891

892

**A.** No, it was not. The data used to calculate the market-DCF derived market return component of my CAPM analyses was accessed from Bloomberg on January 31, 2014. Ms. Phipps suggests that my market return estimate was calculated after January 31, 2014 based on her observation that Crown Castle International Corp. (“CCI”) was listed as a dividend paying company, and that company declared its first dividend payment on February 20, 2014.

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However, Ms. Phipps overlooks that Crown Castle International announced its intent to initiate a dividend in its October 21, 2013 press release

899

<sup>84</sup>

Source: Morningstar, Inc., Ibbotson Stocks, Bonds, Bills and Inflation 2014 Classic Yearbook, at 196-197.

900 which stated:

901 On September 9, 2013, Crown Castle announced it expects to  
902 elect Real Estate Investment Trust (“REIT”) status beginning  
903 with the taxable year commencing January 1, 2014. Subject to  
904 the successful completion and financing of the aforementioned  
905 AT&T tower transaction, Crown Castle expects to initiate a  
906 quarterly dividend of 35 cents per share beginning in the first  
907 quarter of 2014.<sup>85</sup>

908 ***Relevance and Application of Bond Yield Plus Risk Premium Approach***

909 **Q. What is your response to Ms. Phipps’ claim that measuring the Equity Risk**  
910 **Premium over thirty-three years implies the risk of utilities has not changed**  
911 **during that time?**

912 A. My Bond Yield Plus Risk Premium analysis was designed to address that  
913 concern. As stated in my Direct Testimony, “[p]rior research, for example, has  
914 shown the Equity Risk Premium is inversely related to the level of interest  
915 rates.”<sup>86</sup> As such, to perform my regression analysis, I used the semi-log  
916 regression to measure an absolute change in the dependent variable (the Equity  
917 Risk Premium) relative to a proportional change in the independent variable (the  
918 30-year Treasury yield). Nonetheless, to address Ms. Phipps’ concerns, I have  
919 performed an alternative approach to the Bond Yield Plus Risk Premium analysis  
920 based on authorized ROEs from 2011 to the present. I also included credit  
921 spreads (a measure of the incremental price of risk) as an additional independent  
922 variable. This addresses Ms. Phipps’ concern that my analysis assumes that  
923 “risk of utilities has not changed” as well as her concern related to the “heavy

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<sup>85</sup> Crown Castle International, Investors Press Release, *Crown Castle International Reports Third Quarter 2013 Results; and Announces Plan to Initiate Dividend*, October 21, 2013.

<sup>86</sup> Direct Testimony of Robert B. Hevert, at 33-34.

924 reliance on historical data (1992-2010).”<sup>87</sup>

925 As shown in Schedule 7.17, I performed a regression analysis in which the  
926 observed Equity Risk Premium is the dependent variable, and measures of the  
927 prevailing 30-year Treasury yield and credit spread (based on each utility’s credit  
928 rating and the prevailing long-term utility debt yield for that credit rating) are the  
929 independent variables. I continue to use the natural log of the prevailing  
930 Treasury yield and credit spread as the independent variables to account for the  
931 recent variability in interest rates. Based on the regression coefficients in  
932 Schedule 7.17, the implied ROE for a Baa-rated utility is 9.81 percent. While that  
933 result is below my recommended ROE, it is in within the range of recently  
934 authorized returns.

935 ***Recovery of Flotation Costs***

936 **Q. What is Ms. Phipps’ position with regard to recovery of flotation costs?**

937 A. Ms. Phipps opposes recovery of flotation costs, citing Commission precedent. In  
938 addition, Ms. Phipps is concerned that my calculation of flotation costs is not  
939 based on actual issuance costs that the Company has incurred and not  
940 previously recovered through rates, but rather on the average costs of issuing  
941 equity that were incurred by Algonquin Power & Utilities Corporation and the  
942 proxy group companies in their two most recent equity issuances.

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<sup>87</sup> Direct Testimony of Rochelle M. Phipps, at 31-32.

943 **Q. Do you agree with Ms. Phipps that Liberty Utilities has failed to**  
944 **demonstrate that it has incurred flotation costs prior to the test year, which**  
945 **have not been recovered through rates?**

946 A. No, I do not. As explained in my Direct Testimony, flotation costs are part of the  
947 invested costs of the utility, which are properly reflected on the balance sheet  
948 under “paid in capital.”<sup>88</sup> They are not current expenses, and therefore are not  
949 reflected on the income statement. Rather, like investments in rate base or  
950 issuance costs of long-term debt, flotation costs are incurred over time, but  
951 remain part of the cost structure that exists during the test year and beyond.<sup>89</sup>  
952 Although Liberty Utilities does not issue common stock, it still must compete for  
953 equity capital with other APUC affiliates. The common stock which has been  
954 issued by APUC, the parent holding company, has incurred flotation costs, which  
955 are passed through to Liberty Utilities. My calculation of flotation costs includes  
956 the last two equity issuances for APUC and as such, the Company has incurred  
957 actual flotation costs that have not been previously recovered through rates. As  
958 such, I continue to believe it is appropriate to consider flotation costs in the  
959 determination of where the Company’s ROE falls within the range of results.

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<sup>88</sup> See Direct Testimony of Robert B. Hevert, at 46.

<sup>89</sup> See Roger A. Morin, New Regulatory Finance, (Public Utilities Reports, Inc. 2006), at 321-322; Shannon P. Pratt, Cost of Capital Estimation and Applications, Second Edition, at 220-221; and Cleveland S. Patterson, Flotation Cost Allowance in Rate of Return Regulation: Comment, The Journal of Finance Vol. XXXVIII, No. 4. September 1983, at 1337.

961 **V. SUMMARY OF UPDATED ANALYSES**

962 **Q. Have you updated the analyses presented in your Direct Testimony?**

963 A. Yes. I have updated my Multi-Stage DCF, CAPM and Bond Yield Plus Risk  
964 Premium analyses using data as of July 31, 2014.

965 **Q. Please summarize your DCF model results.**

966 A. I continue to develop my Multi-Stage DCF results using the assumptions and  
967 inputs outlined in my Direct Testimony, and have presented those results based  
968 on the low, average and high growth rates for each company.<sup>90</sup> The results of  
969 the Multi-Stage DCF model are shown in Table 4 (below; see *also*, Schedule  
970 7.1).

971 **Table 4: Summary of DCF Model Results<sup>91</sup>**

	<i>Low</i>	<i>Mean</i>	<i>High</i>
30-Day Average Stock Price	9.28%	9.60%	10.05%

972

973 **Q. Please summarize your updated CAPM analysis.**

974 A. I have used data updated through July 31, 2014 for the CAPM analyses. For the  
975 risk-free rate, I continue to refer to: (1) the 30-day average of the 30-year  
976 Treasury yield; and (2) a consensus forecast of the average 30-Year Treasury  
977 yield for the coming six quarters. For the Beta coefficient, I rely on published  
978 estimates from Value Line and a five-year calculated Beta coefficient.

979 For the MRP, I develop *ex-ante* Market Risk Premia using the expected  
980 return on dividend-paying companies in the S&P 500 Index less the current 30-

<sup>90</sup> See Direct Testimony of Robert B. Hevert, at 18-20.

<sup>91</sup> DCF results presented in Table 4 are unadjusted (*i.e.*, prior to any adjustment for flotation costs).

981 year Treasury yield. To calculate the expected market return, I continue to rely  
982 on data from Value Line and Bloomberg.

983 I also consider the results of an alternate CAPM analysis that uses (1)  
984 published Beta coefficients from Bloomberg and an 18-month calculated Beta  
985 coefficient, and (2) Market Risk Premia developed with a market return that  
986 includes both dividend-paying and non-dividend-paying companies.

987 **Q. What are your updated CAPM results?**

988 A. My updated CAPM results are shown in Tables 5 and 6 (below, see also,  
989 Schedules 7.5 and 7.8).

990 **Table 5: Summary of CAPM Results**

	<b>Bloomberg Derived Market Risk Premium</b>	<b>Value Line Derived Market Risk Premium</b>
<i>Average Value Line Beta Coefficient</i>		
Current 30-Year Treasury (3.35%)	10.33%	10.45%
Near Term Projected 30-Year Treasury (4.03%)	11.01%	11.13%
<i>Average Five-Year Calculated Beta Coefficient</i>		
Current 30-Year Treasury (3.35%)	10.23%	10.35%
Near Term Projected 30-Year Treasury (4.03%)	10.92%	11.03%

991 **Table 6: Summary of Alternate CAPM Results**

	<b>Bloomberg Derived Market Risk Premium</b>	<b>Value Line Derived Market Risk Premium</b>
<i>Average Bloomberg Beta Coefficient</i>		
Current 30-Year Treasury (3.35%)	11.25%	11.19%
Near Term Projected 30-Year Treasury (4.03%)	11.93%	11.87%
<i>Average 18-Month Calculated Beta Coefficient</i>		
Current 30-Year Treasury (3.35%)	12.80%	12.74%

	<b><i>Bloomberg Derived Market Risk Premium</i></b>	<b><i>Value Line Derived Market Risk Premium</i></b>
Near Term Projected 30-Year Treasury (4.03%)	13.49%	13.42%

992

993 **Q. Please summarize your updated Risk Premium analysis.**

994 A. My updated Risk Premium analysis includes authorized ROEs as reported by  
995 Regulatory Research Associates through July 31, 2014. For the purpose of  
996 calculating the expected risk premium and ROE, I have used the current, near-  
997 term and long-term projected 30-year Treasury yield, as shown in Schedule 7.9.  
998 As discussed above, I have performed an alternate Risk Premium analysis that  
999 includes credit spreads as an additional explanatory variable and limits the data  
1000 period to 2011-2014 as shown in Schedule 7.17.

1001

**Table 7: Bond Yield Plus Risk Premium Results**

<b><i>Treasury Yield</i></b>	<b><i>Return on Equity</i></b>
Current 30-Year Treasury (3.35%)	10.06%
Near Term Projected 30-Year Treasury (4.03%)	10.21%
Long Term Projected 30-Year Treasury (5.45%)	10.76%

1002

1003

**Table 8: Alternate Bond Yield Plus Risk Premium Results**

<b><i>Treasury Yield</i></b>	<b><i>Return on Equity</i></b>
Current Baa Utility Bond Yield (4.67%)	9.81%

1004

1005 **Q. Have you considered whether your recommended returns meet the**  
1006 **standard of a fair rate of return?**

1007 A. Yes. As I noted in my Direct Testimony, my recommendation is based upon my  
1008 understanding of the *Hope* and *Bluefield* cases, wherein those decisions

1009 established the standards for determining a fair and reasonable allowed Return  
1010 on Equity including: consistency of the allowed return with other businesses  
1011 having similar risk; adequacy of the return to provide access to capital and  
1012 support credit quality; and that the end result must lead to just and reasonable  
1013 rates.<sup>92</sup>

1014 My assessment also reflects the Company's need to attract capital at  
1015 terms similar to those offered to companies of comparable risk. A  
1016 recommendation that diminishes the Company's ability to compete for capital in  
1017 the open market does not meet the "comparable company" standard.

1018 **VI. CONCLUSIONS AND RECOMMENDATION**

1019 **Q. What is your conclusion regarding the Company's cost of capital and**  
1020 **capital structure?**

1021 A. My updated analytical results are provided in Schedules 7.1 through 7.11. Based  
1022 on the analyses discussed throughout my Rebuttal Testimony, I conclude that  
1023 the reasonable range of ROE estimates is from 10.00 percent to 10.50 percent,  
1024 and within that range, 10.50 percent is a reasonable and appropriate estimate of  
1025 the Company's Cost of Equity.

1026 I also find the Company's revised 4.43 percent cost of debt is reasonable.  
1027 Lastly, the Company's proposed capital structure of 60.10 percent common  
1028 equity and 39.90 percent long-term debt is consistent with industry practice and  
1029 reflects the nature of assets financed by natural gas utilities such as Liberty

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<sup>92</sup> See Direct Testimony of Robert B. Hevert, at 5-6.

1030 Utilities. On that basis, I continue to conclude the proposed capital structure is  
1031 reasonable and appropriate.

1032

1033

**Table 9: Summary of Analytical Results**

	<b>Low</b>	<b>Mean</b>	<b>High</b>
<b>Multi-Stage DCF</b>			
<b>30-Day Average</b>	9.28%	9.60%	10.05%
<b>CAPM Results</b>			
		<b>Bloomberg Derived Market Risk Premium</b>	<b>Value Line Derived Market Risk Premium</b>
<i>Average Value Line Beta Coefficient</i>			
Current 30-Year Treasury (3.35%)		10.33%	10.45%
Near Term Projected 30-Year Treasury (4.03%)		11.01%	11.13%
<i>Average Five-Year Calculated Beta Coefficient</i>			
Current 30-Year Treasury (3.35%)		10.23%	10.35%
Near Term Projected 30-Year Treasury (4.03%)		10.92%	11.03%
<b>Alternate CAPM Results</b>			
		<b>Bloomberg Derived Market Risk Premium</b>	<b>Value Line Derived Market Risk Premium</b>
<i>Average Bloomberg Beta Coefficient</i>			
Current 30-Year Treasury (3.35%)		11.25%	11.19%
Near Term Projected 30-Year Treasury (4.03%)		11.93%	11.87%
<i>Average 18-Month Calculated Beta Coefficient</i>			
Current 30-Year Treasury (3.35%)		12.80%	12.74%
Near Term Projected 30-Year Treasury (4.03%)		13.49%	13.42%
<b>Flotation Cost</b>	0.13%		

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1035 **Q. Does this conclude your Rebuttal Testimony?**

1036 A. Yes, it does.