

ILLINOIS COMMERCE COMMISSION

DOCKET Nos. 09-0306 - 09-0311 (Cons.)

REBUTTAL TESTIMONY

OF

KATHLEEN C. McSHANE

SUBMITTED ON BEHALF OF

**CENTRAL ILLINOIS LIGHT COMPANY
d/b/a AmerenCILCO**

**CENTRAL ILLINOIS PUBLIC SERVICE COMPANY
d/b/a AmerenCIPS**

**ILLINOIS POWER COMPANY
d/b/a AmerenIP**

(The Ameren Illinois Utilities)

OCTOBER 23, 2009

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7 **The Ameren Illinois Utilities**

8 **I. INTRODUCTION**

9 **Q. Please state your name and business address.**

10 A. My name is Kathleen C. McShane. My business address is Foster Associates, Inc., 4550
11 Montgomery Avenue, Suite 350N, Bethesda, Maryland 20814.

12 **Q. Are you the same Kathleen C. McShane who previously provided testimony in this**
13 **proceeding?**

14 A. Yes, I am.

15 **II. PURPOSE OF TESTIMONY**

16 **Q. What is the purpose of your rebuttal testimony?**

17 A. I will address the principal concerns that I have with the return on equity testimony of
18 Ms. Janice Freetly for Staff of the Illinois Commerce Commission (“Staff”), Mr. Michael
19 Gorman for Illinois Industrial Energy Consumers (“IIEC”), and Mr. Christopher Thomas for the
20 Citizens Utility Board (“CUB”) as well as their critiques of my equity return analysis. My
21 evidence is structured as follows: First, I will address the direct testimony of each of the

22 witnesses individually. Second, I will update my return on equity analysis and, finally, I will
23 address the witnesses' critiques of my direct testimony by topic.

24 **III. REBUTTAL TO MS. FREETLY**

25 **Q. Please summarize briefly the rebuttal testimony of Staff's witness, Ms. Freetly, in**
26 **this case.**

27 A. Ms. Freetly applies both a non-constant (three-stage) Discounted Cash Flow ("DCF") test
28 and the Capital Asset Pricing Model ("CAPM") to a sample of nine local gas distribution
29 companies and sixteen electric utilities to estimate the cost of equity for the gas distribution and
30 electric delivery operations of AmerenCILCO ("CILCO"), AmerenCIPS ("CIPS") and AmerenIP
31 ("IP"). Based on a simple average of the DCF-derived results (9.79% gas; 10.49% electric) and
32 the CAPM results (9.46% gas; 10.21% electric), she estimated the investor required rate of return
33 on common equity at 9.63% for the gas sample and 10.35% for the electric sample.

34 She then makes several adjustments to these results. The first adjustment, applied to both
35 the gas and electric operations, represents Ms. Freetly's estimate of the difference in equity
36 return requirement due to financial risk differences between the individual Ameren Utilities and
37 the gas or electric samples. The second adjustment, applied to the gas operations only, is a
38 downward adjustment of 10 basis points to the cost of equity as ordered in Order 07-0585 et al.
39 (Cons.) to reflect the impact on the cost of equity of the increased portion of fixed delivery
40 services costs recovered through the monthly customer charge. The third adjustment, applied to
41 both the gas and electric operations, is a downward adjustment to reflect Ms. Freetly's estimate
42 of the reduction in the cost of equity associated with the Uncollectibles Riders GUA and EUA.

43 The table below summarizes the cost of equity adjustments and Ms. Freetly’s recommended
44 returns incorporating all adjustments.

45 **Table 1**

	CILCO		CIPS		IP	
	Gas	Electric	Gas	Electric	Gas	Electric
Sample DCF	9.79%	10.67% ^{1/}	9.79%	10.67% ^{1/}	9.79%	10.67% ^{1/}
Sample CAPM	9.46%	10.21%	9.46%	10.21%	9.46%	10.21%
Sample Average	9.63%	10.44%^{1/}	9.63%	10.44%^{1/}	9.63%	10.44%^{1/}
Adjustments						
Financial Risk	0.30%	-0.04%	-0.12%	-0.12%	0.30%	0.0%
Fixed Customer Charge	-0.10%	0.0%	-0.10%	0.0%	-0.10%	0.0%
Uncollectibles Rider Adjustment	-0.95%	-0.41%	-0.74%	-0.67%	-0.75%	-0.29%
Total Adjustments	-0.75%	-0.45%	0.96%	-0.79%	0.55%	-0.29%
Final Recommended Return	8.89%	9.90%	8.68%	9.57%	9.08%	10.06%

46 1/ Ms. Freetly’s non-constant DCF model incorrectly calculated the DCF costs of equity for Ameren and Great
47 Plains Energy by assuming the dividend cuts in 2009 were permanent, i.e., no increase in dividend on a go-
48 forward basis. The numbers presented in Table 1 correct for this mistake. (See “Freetly Corrected Electric Three
49 Stage DCF Model.xls”) I did not estimate the impact of this correction on the adjustments for the electric sample.
50 Source: ICC Staff Exhibit 6.0, Schedule 6.11

51 **Q. Please describe Ms. Freetly’s DCF test.**

52 A. Ms. Freetly applied a single non-constant growth DCF test to both a sample of natural gas
53 distribution companies and a sample of electric utilities.¹ Ms. Freetly’s decision to rely on a
54 single non-constant growth DCF model reflects her view that near-term growth rates forecast for
55 the companies in the sample are not sustainable over the long-term. She thus rejects the constant
56 growth model incorporating objective published consensus growth rates.

57 **Q. Do you agree with Ms. Freetly’s use of the forward yield on the 20-year Treasury as**
58 **a proxy for long-term GDP growth in the final stage of her three-stage DCF model?**

¹ Ms. Freetly’s gas sample is the same sample I used in my analysis. Her electric sample is a subset of my sample.

59 A. No. While in theory the long-term rate of growth in the economy and the long-term risk
60 free rate as proxied by long-term government bond yields should be similar, the observed long-
61 term government bond yield may deviate from its long-term equilibrium level due to such factors
62 as monetary policy, the current point in the business cycle, and the effects of a flight to quality,
63 as occurred during the recent credit crisis.

64 To illustrate, efforts by the Federal Reserve to stimulate the economy in conjunction with
65 a “flight to quality” resulted in U.S. treasury yields sinking to levels not seen in decades at the
66 end of 2008. At the initial onset of the credit crisis in August 2007, the implied 20-year forward
67 Treasury yield was 5.04%. At the end of December 2008, it was 2.9%; at the end of September
68 2009, it was 4.6%. In the past two years, the implied 20-year forward Treasury yield has swung
69 by over two percentage points.

70 Ms. Freetly’s approach suggests that, based on changes in the implied forward yield on
71 the 20-year Treasury, expectations of long-term economic growth declined by over 2 percentage
72 points between August 2007 and December 2008 and then have risen by 1.7 percentage points
73 between December 2008 and the end of September 2009. By comparison, over the same period
74 of time, the consensus forecasts of long-term economic growth, as shown in Table 2 below, have
75 been virtually unchanged.²

76 **Table 2**

Jun-07	5.2%
Oct 07	5.1%
Dec-07	5.1%
Mar-08	5.1%
Jun-08	5.1%
Oct-08	5.2%

² Blue Chip *Economic Indicators*, March 2008, October 2008 and March 2009; Blue Chip *Financial Forecasts*, June 2007, December 2007, June 2008, December 2008 and June 2009.

Dec-08	5.1%
Mar-09	5.1%
Jun-09	5.1%

77

78 The most recent forecast of long-term economic growth remains at 5.1%.³

79 Although the difference between the specific implied forward yield on the 20-year
80 Treasury used by Ms. Freetly and the most recent consensus forecast of long-term economic
81 growth is relatively small, the capital market experience over the past two years demonstrates
82 that the differential can be substantial.

83 **Q. What conclusion have you drawn from the analysis of the implied forward yields?**

84 A. It is more appropriate to use a direct estimate of long-term economic growth as provided
85 by the consensus of economists' forecasts than to infer expected growth from the prevailing
86 yields on Treasury securities. The consensus rate of growth is 5.1%. This rate represents the
87 mean of a large sample of economic forecasts reducing the possibility of potential bias.

88 **Q. Did you adjust Ms. Freetly's multi-stage DCF results to reflect the use of the direct
89 estimate of long-term economic growth in the final stage?**

90 A. Yes. Replacing Ms. Freetly's forward 20-year Treasury yield of 4.83% with the
91 consensus forecast of long-term growth of 5.1% raises her non-constant DCF test result from
92 9.79% to 10.0% for the gas sample and from 10.67% to 10.86% (See Ameren Exhibit 36.0,
93 Schedule 1, pages 1 and 2).

94 **Q. Has Ms. Freetly previously relied on the results of a non-constant growth DCF test
95 rather than a constant growth DCF test?**

³ Blue Chip *Financial Forecasts*, June 2009.

96 A. Yes. Ms. Freetly utilized a single non-constant growth DCF approach in the 2007
97 Ameren Utilities delivery service case.⁴ In fact, in the current proceeding, Ms. Freetly states that
98 Staff does not “typically” rely on the results of a multi-stage model because it is “more
99 elaborate” and “likely subject to greater measurement error than the analyst growth rate estimates
100 Staff uses in constant-growth DCF analyses.” (ICC Staff Exhibit 6.0, page 5)

101 **Q. Did Ms. Freetly previously rely upon a constant growth DCF model when the**
102 **analysts’ consensus forecasts were higher than the forecast long-term growth in the**
103 **economy?**

104 A. Yes. In Docket 01-0696 for MidAmerican, in applying the DCF test, Ms. Freetly used a
105 constant growth model, rather than a non-constant growth model, for a sample of 12 gas
106 distributors and an estimated growth rate based solely on analysts’ forecasts. The estimated
107 growth rate in that proceeding, based on analysts’ forecasts, was 7.2%, which was approximately
108 1.7 percentage points higher than the 5.5% consensus long-term growth rate forecast for the
109 economy at that time.⁵ In the current case, the differential between the average growth rate of
110 6.33% based on analysts’ forecasts for Ms. Freetly’s sample of nine gas companies is only 1.25
111 percentage points higher than the most recent consensus forecast (5.1%) of long-term economic
112 growth. Similarly, the differential between the average growth rate of 6.53% based on analysts’
113 forecasts for Ms. Freetly’s sample of 16 electric utilities is less than 1.5 percentage points higher
114 than the consensus forecast of long-term economic growth.

115 **Q. Does Ms. Freetly utilize a constant growth model elsewhere in her testimony?**

⁴ Docket Nos. 07-0585 - 0590 (Cons.), ICC Staff Exhibit 5.0.

⁵ For the period 2003-2012, based on *Blue Chip Economic Forecasts*, October 10, 2001.

116 A. Yes. Ms. Freetly utilizes a constant growth DCF model to develop her estimate of the
117 expected return on the market in her equity risk premium model. If a constant growth model is
118 an appropriate method for developing an expected return on the equity market as a whole, it is an
119 equally appropriate method for developing the expected return for a sample of gas distributors.

120 **Q. What would be the results of the constant growth model as Ms. Freetly has applied**
121 **it in past testimony?**

122 A. As demonstrated in Ameren Exhibit 36.0, Schedule 2, page 1, the average DCF cost of
123 equity for Ms. Freetly's gas utility sample based on the constant growth model is 10.96%,
124 compared to the average multi-stage DCF cost of equity of 9.79%. The average DCF cost of
125 equity for Ms. Freetly's electric utility sample based on the constant growth model is 11.91%,
126 compared to the average multi-stage DCF cost of equity of 10.67% (Ameren Exhibit 36.0,
127 Schedule 2, page 2).

128 **Q. Are you suggesting that Ms. Freetly should rely solely on the constant growth model**
129 **using analysts' earnings forecasts as the long-term expected growth rate?**

130 A. No. I have used both a constant growth and a multi-stage growth model and, in my
131 opinion, it is reasonable to give weight to both models. If Ms. Freetly gave equal weight to the
132 results of the constant growth and multi-stage models (as adjusted for the consensus forecast of
133 long-term economic growth), her DCF estimate would be 10.48%⁶ for the gas sample and
134 11.39%⁷ for the electric sample.

135 **Q. Please describe Ms. Freetly's CAPM results.**

⁶ 10.48% is an average of 10.96% (constant growth DCF) and 10.0% (multi-stage DCF).

⁷ 11.39% is an average of 11.91% (constant growth DCF) and 10.86% (multi-stage DCF).

136 A. Ms. Freetly estimates the cost of equity through application of the CAPM using a risk-
137 free rate of 4.4%, equal to the 30-year Treasury yield on August 18, 2009, an estimate of the
138 market return of 12.7% and betas of 0.61 for the gas sample and 0.70 for the electric sample.

139 **Q. Please discuss any concerns you have with her application of the CAPM.**

140 A. My chief concern is with her beta, although I will also mention concerns with her
141 selection of a risk free rate. Ms. Freetly averages betas provided by *Value Line* and Zacks with
142 regression betas that she calculates herself. The sample average betas for the Ms. Freetly's gas
143 and electric samples are shown in the table below:

144 **Table 3**

	Gas Sample	Electric Sample
<i>Value Line</i>	0.68	0.71
Zacks	0.56	0.72
Staff Regression	0.51	0.69

145 Unlike *Value Line*, which employs weekly data, both the regression approach used by
146 Ms. Freetly and the estimates published by Zacks are calculated using monthly, rather than
147 weekly, data. To avoid over-weighting the monthly data approach, Ms. Freetly averages the
148 Zacks and regression betas.

149 Calculating betas using monthly observations is problematic. Specifically, betas derived
150 utilizing 60 data points, i.e., monthly data, rather than 260 data points, i.e., weekly data, are more
151 likely to be impacted by the presence of outlying observations. Outliers will strongly influence
152 the slope of the regression line. Greater confidence can thus be placed in the weekly betas,
153 which have five times as many observations, thus diluting the impact of observations that are
154 outliers.

155 A review of Staff testimony, as summarized in the table below, shows that regression
156 betas calculated by the Illinois Commerce Commission Staff using monthly data have
157 consistently been lower than the *Value Line* betas which use weekly data.

158 **Table 4**

Docket Number/Company	<i>Value Line</i> Beta	ICC Staff Regression Beta
02-07998/03-0008-03-0009 CIPS and UE	0.69	0.50
04-0476 Illinois Power	0.75 (gas) 0.79 (utility)	0.58 (gas) 0.72 (utility)
04-0779 Nicor Gas	0.76	0.56
06-0070/06-0071/06-0072 (Cons.) CILCO, CIPS, IP	0.83	0.68
07-0241/07-0242 (Cons.) Peoples Gas and North Shore Gas	0.87	0.62
07-0566 Commonwealth Edison	0.82	0.67
07-0585-0590 CILCO CIPS IP	0.88 (gas) 0.83 (electric)	0.74 (gas) 0.77 (electric)
08-0363 Nicor Gas	0.87	0.69
09-0166, 09-0167 Peoples Gas and North Shore Gas	0.66	0.49

159 Because of the concerns inherent in the estimation of monthly betas, *Value Line* betas,
160 calculated using weekly data, are to be preferred.

161 **Q. Can you provide additional support for this conclusion?**

162 A. Yes. I calculated the betas for the five 5-year periods ending 2005, 2006, 2007, 2008 and
163 July 2009 (the period of Ms. Freetly's regression beta analysis) for the sample of gas companies
164 used by Ms. Freetly and myself using the same stock index as she did (the NYSE Index) and
165 both monthly and weekly data. The resulting unadjusted betas, the adjusted R²s, the standard
166 errors and t-statistics are provided in the table below.

167

Table 5

5-Year Period Ending	Weekly Observations				
	Unadjusted Betas	t- Statistic	Adjusted Betas	Adjusted R²	Standard Error
Dec-05	0.67	14.8	0.78	46%	0.015
Dec-06	0.75	15.8	0.83	49%	0.014
Dec-07	0.80	16.7	0.86	52%	0.013
Dec-08	0.62	15.0	0.75	46%	0.018
Jul-09	0.60	14.7	0.73	45%	0.020
5-Year Period Ending	Monthly Observations				
	Unadjusted Betas	t- Statistic	Adjusted Betas	Adjusted R²	Standard Error
Dec-05	0.47	3.6	0.65	17%	0.029
Dec-06	0.47	3.5	0.64	16%	0.028
Dec-07	0.27	1.7	0.51	3%	0.029
Dec-08	0.19	1.7	0.46	3%	0.031
Jul-09	0.20	1.9	0.47	4%	0.035

168 The table above shows that, using the same stock market index as Ms. Freetly, in each
169 case, the weekly betas have higher adjusted R²s, lower standard errors and higher t-statistics. It
170 is clear that the weekly betas have higher explanatory power (higher adjusted R²s) and less
171 uncertainty as to the true value (lower standard errors) of the estimate for beta. Ameren Exhibit
172 36.0, Schedules 3 and 4, page 1, plot (1) the weekly and monthly observations along with the
173 line fitted to those observations (the slope of which is the unadjusted beta); and (2) the residuals
174 from that fitted line.⁸ The pattern of the residuals resulting from the regression of weekly data,
175 clearly centered on zero and indicating smaller errors between the regression line and the
176 observed data, demonstrate how much more confidence one can have in the betas measured
177 weekly.

178 The adjusted monthly beta I calculated for Ms. Freetly's gas sample is very close to her
179 adjusted monthly beta, 0.47 as compared to 0.51 (Freetly Exhibit 6.0, page 21). The adjusted

⁸ The residuals are the differences between the actual observations and the corresponding values predicted by the regression.

180 weekly beta is also very close to that estimated by *Value Line* (0.73 as compared to 0.68) even
181 though a different stock market index is used. Specifically, like Ms. Freetly, I used the NYSE
182 Index when calculating these betas; *Value Line* uses the S&P 500. This analysis indicates that
183 much greater confidence can be placed in the weekly betas.

184 **Q. Does an analysis of betas calculated for Ms. Freetly’s electric sample lead to similar**
185 **conclusions?**

186 A. Yes. The weekly betas have equal or better explanatory power (higher adjusted R²s) in
187 all but one period and less uncertainty as to the true value (lower standard errors) of the estimate
188 for beta than the monthly betas in all periods examined.

189 **Table 6**

5-Year Period Ending	Weekly Observations				
	Unadjusted Betas	t- Statistic	Adjusted Betas	Adjusted R ²	Standard Error
Dec-05	0.70	11.8	0.80	35%	0.02
Dec-06	0.75	13.8	0.83	42%	0.02
Dec-07	0.73	15.3	0.82	47%	0.01
Dec-08	0.62	17.7	0.74	55%	0.02
Jul-09	0.59	17.3	0.73	53%	0.02
5-Year Period Ending	Monthly Observations				
	Unadjusted Betas	t- Statistic	Adjusted Betas	Adjusted R ²	Standard Error
Dec-05	0.75	5.8	0.83	35%	0.04
Dec-06	0.92	7.6	0.94	49%	0.03
Dec-07	0.80	5.4	0.87	32%	0.03
Dec-08	0.53	5.6	0.68	34%	0.03
Jul-09	0.46	5.1	0.64	30%	0.03

190 The adjusted monthly beta I calculated for Ms. Freetly’s electric sample is very close to
191 her adjusted monthly beta, 0.64 as compared to 0.66 (Freetly Exhibit 6.0, page 22). The adjusted
192 weekly beta is also very close to that estimated by *Value Line* (0.73 as compared to 0.71) even
193 though a different stock market index is used.

194 **Q. What conclusions do you draw from these analyses?**

195 A. Based on the analyses above, I conclude that the monthly betas (Zack's and Ms. Freetly's
196 regression betas) should be rejected as they are statistically inferior to weekly betas and only the
197 weekly (*Value Line*) betas should be relied on for purposes of the CAPM test.

198 **Q. What is the impact of using only the *Value Line* betas in Ms. Freetly's CAPM
199 analysis?**

200 A. Using only the average *Value Line* beta of 0.68 for the gas distribution sample and 0.71
201 for the electric utility sample increases Ms. Freetly's CAPM result to 10.05%⁹ and 10.3%.¹⁰

202 **Q. Do you agree with Ms. Freetly's use of a 4.4% spot 30-year Treasury yield in
203 deriving her CAPM estimate of the cost of equity?**

204 A. No, a "spot" yield should not be relied upon as representative of expected yields
205 particularly, as stated above, when the yields are expected to rise as economic activity picks up.
206 It is true that, given the "spot" state of the capital markets, investors are willing to accept a long-
207 term Treasury yield of 4.4%. However, sophisticated investors are well aware of the business
208 and interest rate cycles, as well as the fundamentals which determine equilibrium interest rates.
209 They recognize, based on economics and experience, that interest rates will rise as the economy
210 improves. For purposes of determining a forward-looking cost of equity that will be reflected in
211 going forward rates, the risk-free rate should incorporate the rise in interest rates that is widely
212 expected to occur.

213 **Q. What is the most recent forecast of the 30-year Treasury yield?**

⁹ 10.05% = 4.4% + 0.68 * (12.7% - 4.4%)

¹⁰ 10.3% = 4.4% + 0.71 * (12.7% - 4.4%)

214 A. The most recent consensus forecast anticipates that the 30-year Treasury yield will reach
215 5.0% by the end of 2010 and average 4.8% during 2010 as the economy recovers from the
216 financial crisis and economic recession.¹¹

217 **Table 7**

30-Year Treasury Forecast	
2010 Q1	4.6%
2010 Q2	4.7%
2010 Q3	4.8%
2010 Q4	5.0%
Average 2010	4.8%

218 Thirty-year Treasury yields are expected to increase further as the economy continues to
219 recover. Based on the most recent forecasts available for long-term Treasury bonds the 30-year
220 Treasury yield is expected to average 5.2% over the period 2010-2014,¹² which would
221 correspond to the same five-year period for which the analysts' forecast growth rates for the
222 equity market are made.

223 **Q. What are the resulting CAPM costs of equity arising from incorporating both a**
224 **forecast 30-year Treasury yield of 5.2% and utilizing only the *Value Line* betas of 0.68 and**
225 **0.71 for the gas and electric samples, respectively?**

226 A. The resulting estimated CAPM costs of equity for the gas and electric samples are
227 10.3%¹³ and 10.5%,¹⁴ respectively.

228 **Q. What are the resulting costs of equity for Ms. Freetly's samples arising from the**
229 **combination of 1) giving weight to both the non-constant and constant growth DCF models**
230 **in determining the DCF test result and 2) the changes to Ms. Freetly's CAPM test?**

¹¹ Blue Chip *Financial Forecasts*, September 2009.

¹² Blue Chip *Financial Forecasts*, June and September 2009.

¹³ $10.3\% = 5.2\% + 0.68 * (12.7\% - 5.2\%)$

¹⁴ $10.5\% = 5.2\% + 0.71 * (12.7\% - 5.2\%)$

231 A. Ms. Freetly gives equal weight to the results of the DCF test and the CAPM. For the gas
232 sample, by averaging the revised results of 10.48% (DCF) and 10.3% (CAPM), the cost of equity
233 is approximately 10.35%. For the electric sample, the average of the revised results of 11.39%
234 (DCF) and 10.5% (CAPM) results in a cost of equity of 10.95%.

235 **Q. Ms. Freetly makes several adjustments to the cost of equity estimates for her electric**
236 **and gas samples to arrive at her recommended returns on equity for the Ameren Utilities.**
237 **Do you agree with the adjustments?**

238 A. No. Ms. Freetly makes adjustments for (1) the financial risk of each of the Ameren
239 Utilities relative to the gas and electric samples, based on the implied credit metrics that result
240 from the adoption of Staff's revenue requirement proposals; (2) the approval for the gas
241 operations of a new rate design in Order 07-0585 *et. al.* (Cons); and (3) her assessment of the
242 impact on the cost of equity of the approval of Riders EUA and GUA. These adjustments are
243 summarized in Table 1 above.

244 The first adjustment is based on Ms. Freetly's conclusions that the adoption of the Staff's
245 recommendations for the various components of the revenue requirement will result in a degree
246 of financial risk that is either higher or lower than the financial risk of the proxy samples. She
247 concludes that the adoption of Staff's recommendations will result in higher financial risk for
248 CILCO and IP and lower financial risk for CIPS than achieved by the sample of gas distribution
249 utilities. For the Ameren Utilities' electric utility operations, she concludes that the adoption of
250 Staff's recommendations will result in lower financial risk for CILCO and CIPS than achieved
251 by her sample of electric utilities. The adjustments to the cost of equity that Ms. Freetly makes
252 represent the bond yield spread between the implicit credit rating of the proxy sample based on

253 its credit metrics and the implicit credit rating of the individual Ameren Utilities based on the
254 credit metrics that would result from the adoption of the Staff's recommendations.

255 My principal concern with the adjustments for financial risk lies with those made for the
256 electric utility operations, which are the primary determinants of the actual credit ratings of the
257 Ameren Utilities. Ms. Freetly's adjustments are premised on the conclusion that the adoption of
258 Staff's revenue requirement recommendations will result in credit metrics consistent with
259 implied Moody's credit ratings of A1 for CILCO, Aa2 for CIPS and A2 for IP, compared to
260 credit metrics for her sample of electric utilities which she concludes are consistent with an
261 implied Moody's credit rating of A2. First, the actual credit rating of Ms. Freetly's electric
262 utility sample is Baa2 (Staff Exhibit 6.0, Schedule 6.01-E), a full credit rating (three notches)
263 lower than Ms. Freetly's assessment of the implied ratings of the electric sample based on credit
264 metrics alone. Since Moody's gives 40% weight to financial strength, if Ms. Freetly's
265 assessment were correct, the implied ratings of the electric sample on the remaining factors to
266 which Moody's gives weight (Regulatory framework, 25%; Ability to Recover Costs and Earn
267 Returns, 25%; and Diversification, 10%) would have to be on average below investment grade.
268 This is a highly unlikely outcome. Of the 21 U.S. utilities (gas and electric) reviewed in
269 Moody's August 2009 *Rating Methodology: Regulated Electric and Gas Utilities*, only two have
270 a Regulatory Framework rating below investment grade and none has an Ability to Recover
271 Costs and Earn Returns rating below investment grade. Thus, Ms. Freetly's comparison of the
272 Ameren Utilities' electric utility operations to her sample of electric utilities is based on an
273 unreliable analysis.

274 Further, Ms. Freetly's adjustments are premised on the assumption that the Ameren
275 Utilities will actually achieve the credit metrics that are implicit in Staff's recommendations.

276 The actual credit metrics reported by Moody's for the Ameren Utilities in the most recent credit
277 rating reports¹⁵ indicate that for both CIPS and IP, the actual credit metrics have resulted in
278 implied credit ratings on the financial strength factors which are in the Baa category, not in the
279 Aa2 and A1 ratings which Ms. Freetly assumes would result from acceptance of the Staff's
280 recommendations.

281 Moreover, despite the noted improvement in the political and regulatory climate in
282 Illinois, Moody's implicit ratings for the Regulatory Framework for all three Ameren Utilities
283 remain non-investment grade (Ba) with ratings on the Ability to Recover Costs and Earn Returns
284 in the Baa category. On the basis of all factors to which Moody's assigns weights, the actual
285 ratings of all three Ameren Utilities are Baa3, lower than the Baa2 rating of her electric utility
286 sample. This is objective evidence that the capital markets view the Ameren Utilities as facing
287 higher combined business and financial risk than Ms. Freetly's sample of electric utilities. Until
288 such time as capital market evidence demonstrates that the Ameren Utilities are able to achieve
289 the credit metrics assumed by Ms. Freetly and the Ameren Utilities' electric utility operations are
290 indeed viewed by the market as having lower total risk than the sample of electric utilities
291 companies used as a proxy for the cost of equity, downward adjustments to the proxy sample's
292 cost of equity for financial strength are not supportable.

293 The second adjustment is a downward adjustment of 10 basis points applied to the gas
294 distribution operations related to the adoption of a new rate design which allowed for the
295 recovery of a higher percentage of fixed delivery costs through customer charges. As noted in
296 my Direct Testimony (McShane Exhibit 12.0G, page 8, CIPS, page 8, CILCO and page 8, IP),
297 eight of the nine gas distributors in my proxy sample (which Ms. Freetly adopted) have either

¹⁵ Moody's, *Credit Opinion: Illinois Power Company*, August 14, 2009, Moody's, *Credit Opinion: Central Illinois Public Service Company*, August 14, 2009, and Moody's, *Credit Opinion: Central Illinois Light Company*, August 14, 2009

298 full or partial protection from weather and customer consumption decline risk through weather
299 normalization clauses, rate design and/or revenue decoupling. Consequently, if indeed equity
300 investors imputed lower risk due to the adoption of mechanisms similar in substance to the rate
301 design adopted for the Ameren Utilities' gas distribution operations, it would already be reflected
302 in the cost of equity estimates for the sample companies. Ms. Freetly's reduction to their
303 estimated cost of equity for the Ameren Utilities' gas rate design would double count any risk
304 reduction that might be imputed by investors and should be rejected.

305 With respect to the third adjustment, Ms. Freetly contends that the return on equity
306 should be reduced by 29 (IP Electric) to 96 (CIPS Gas) basis points for the adoption of the
307 proposed uncollectibles Riders EUA and GUA. The estimated downward adjustments represent
308 the average of two separate approaches.

309 The first approach is based on the assumption that the adoption of the riders would
310 improve the Ameren Utilities' regulatory framework and sustainable profitability and thus
311 increase the Moody's implied credit rating on these two factors by one full credit rating. Based
312 on the weights (30%) that Moody's gives to these two factors in its gas utilities' ratings
313 methodology, Ms. Freetly assumed that the approval of the uncollectibles riders would be
314 consistent with an improvement of one notch in the overall credit ratings for each of the Ameren
315 Utilities. The one notch increase in the credit rating is equivalent to a 10 basis point reduction in
316 the cost of debt for CIPS, CILCO (electric) and IP (electric) and 50 basis points for CILCO (gas)
317 and IP (gas), which Ms. Freetly assumed would translate into a similar decrease in the cost of
318 equity for each of the utilities

319 The assumption that Moody's would change both the regulatory framework and
320 sustainable profitability factors for the Ameren Utilities by a full credit rating for the adoption of

321 the uncollectibles riders is without merit. The improved political and regulatory climate in
322 Illinois, which would include the legislation providing Illinois utilities with a bad debt rider,
323 resulted in only a one notch upgrade in the Ameren Utilities credit ratings. As Ms. Freetly noted,
324 in assigning the upgrades, Moody's acknowledged the legislation and had already factored that
325 into its decision to upgrade the Ameren Utilities to investment grade. The subsequent actual
326 adoption of a single rider, which is already provided for in legislation, while it would be a
327 positive for credit quality, is unlikely to result in a full credit rating category improvement in
328 both regulatory framework and sustainable profitability. However, even if it did, and, as a result,
329 the Ameren Utilities were upgraded to Baa2, they would still have equivalent (in the case of the
330 electric utility operations) or lower (in the case of the gas utility operations) credit ratings than
331 the proxy utilities Ms. Freetly relied upon to estimate the cost of equity. Thus, there would be no
332 reason to conclude that, even with the riders, the equity market would view them as less risky
333 than the proxy utilities.

334 Ms. Freetly's second approach adjusts the cost of equity by first estimating how much
335 higher on a percentage basis the operating income of the individual Ameren Utilities would have
336 been on average over the past ten years had the proposed riders been in effect. Her
337 recommended return on common equity was then adjusted down until the operating income with
338 the riders equaled the operating income without the riders. The resulting downward adjustments
339 for the individual Ameren gas and electric operations range from 48 basis points to 139 basis
340 points (averaging a downward adjustment of 64 basis points for all six utilities), depending on
341 the individual operations' historic experience.

342 This analysis is seriously flawed. First, Ms. Freetly's analysis presumes that there is an
343 expectation built into the cost of equity for the proxy utilities for that they will systematically

344 under-recover their bad debt expense. There is no evidence that is the case. In fact, in respect of
345 gas utilities, Moody's has noted that the gas LDCs its monitors have "reasonably good protection
346 of gas cost pass-through and bad debt collection riders."¹⁶ Thus, there is no rationale for
347 removing a premium from the cost of equity that does not exist.

348 More generally, estimates of the cost of equity are premised on the assumption that there
349 is an equal probability of the utility earning more or less than the allowed return, i.e., risk is
350 symmetric. The historic evidence, as it applies specifically to the bad debt expense of the
351 Ameren Utilities, indicates that the premise that risk is symmetric has not held.¹⁷ Further, the
352 cost of equity does not compensate for asymmetric risk, that is, for a higher probability that the
353 actual return will be below the allowed return. The adoption of the GUA and the EUA riders
354 will provide the Ameren Utilities and opportunity to recover their actual bad debt expense and to
355 earn a return equal to the cost of capital. If the Commission were to adopt Ms. Freetly's second
356 approach, effectively the return would be reduced for a risk for which the Ameren Utilities have
357 never been compensated.

358 Second, Ms. Freetly's analysis assumes that, as the actual return on equity rises (toward
359 the allowed return), the cost of equity falls by an equivalent amount. There is no theoretical or
360 empirical support for the relationship between the actual return on equity and the cost of equity
361 posited by Ms. Freetly.

362 **IV. RESPONSE TO MR. GORMAN**

363 **Q. Please summarize Mr. Gorman's testimony on cost of equity.**

¹⁶ Moody's, *Special Comment, Gas Utilities See Late Payments Rise But Liquidity Holds Up*, August 2008. The American Gas Association also noted in its December 2008 *Bad Debt Cost Recovery 2008 Update* that "Currently, 44 natural gas utilities in 19 states, the District of Columbia, and Canada have implemented innovative bad debt cost recovery mechanisms and are recovering all or part of related costs in adjustment clauses known as rate trackers or deferral accounts."

¹⁷ As per Ms. Freetly's Ameren Operating Income Analysis for Uncoll. Riders Workpaper.

364 A. Mr. Gorman relies on two tests, the DCF and the CAPM, to which he gives equal weight.
365 He uses two DCF models, a multi-stage model and a sustainable growth model. He makes
366 separate estimates of the cost of equity for samples of electric and gas utilities, but combines
367 them to arrive at a single recommended return on equity of 10% for each of the six Ameren
368 Utilities.

369 **Q. At page 25 of his testimony, Mr. Gorman states that the constant growth DCF**
370 **model return is not reasonable and represents an inflated return for AUI at this time. He**
371 **claims that the dividend yield for the electric utilities (5.23%) is abnormally high and the**
372 **long-term growth rate forecast by analysts for the electric utilities (6.15%) is unsustainably**
373 **high. How do you respond?**

374 A. With respect to the dividend yield, it is not abnormally high. Mr. Gorman compares the
375 recent dividend yield to the average for the past five years to come to his conclusion that the
376 dividend yield is abnormally high. During much of the five year period (2004-2008), the cost of
377 capital was abnormally low, characterized by easy credit, low economic volatility and a
378 relatively high investor tolerance for risk, a landscape which has been altered by the financial
379 crisis of 2008-2009. The current dividend yields for the electric utility sample are more
380 representative of their historical average levels. The average dividend yield for the electric
381 utility sample (before adjustment for expected growth) since 1991 has been 5.3% (Ameren
382 Exhibit 36.0, Schedule 7), similar to the recent levels used by Mr. Gorman in his DCF tests.

383 With respect to the expected growth rate, analysts' growth forecasts are the most
384 objective measure of the market's growth expectations. In his testimony (page 23) Mr. Gorman
385 states:

386 However, for purposes of determining the market required return on
387 common equity, one must attempt to estimate investors' consensus
388 about what the dividend or earnings growth rate will be, and not what
389 an individual investor or analyst may use to form individual
390 investment decisions.

391 Security analysts' growth estimates have been shown to be more accurate predictors of
392 future returns than growth rates derived from historical data. Assuming the market generally
393 makes rational investment decisions, forward looking growth projections are more likely
394 reflective of the growth estimates considered by the market that influence observable stock
395 prices than are growth rates derived from only historical data.

396 Nevertheless, by discarding his constant growth model results, Mr. Gorman has
397 completely substituted the objective views of analysts with his judgment of what investors view
398 as reasonable and impounded into stock prices.

399 **Q. Isn't Mr. Gorman's conclusion reasonable that in the long-term growth rates cannot**
400 **exceed the rate of growth in the economy?**

401 A. Yes, theoretically that is true, which supports using a multi-stage growth DCF model as
402 an alternative measure of the returns that investors expect. However, since analysts do not make
403 forecasts beyond five years, it is not possible to determine whether investors implicitly expect
404 the forecast growth rates to continue indefinitely or, if they expect growth rates to decline to a
405 level approximately equal to the rate of growth in the economy, when that would occur. Thus
406 the constant growth DCF model is the only model that fully retains only objective evidence of
407 investors' growth expectations. Those results should be given at least equal weight to the results
408 of alternative models which incorporate more subjective judgments as to what investors regard
409 as reasonable.

410 I would also note that Mr. Gorman has previously relied on a constant growth DCF result
411 when analysts' forecasts of growth were higher than the expected long-term growth in the
412 economy. In Docket 01-0432 September 2001 for Illinois Power, Mr. Gorman used a forecast
413 growth rate of 6.8% based on analysts' forecasts for a sample of electric utilities. That growth
414 rate is similar to the recent analysts' forecasts of growth for the electric utility sample used by
415 both me and Mr. Gorman in this proceeding. Since the forecast long-term growth for the
416 economy is reasonably similar to what it was in 2001,¹⁸ it is perplexing why investors could have
417 reasonably anticipated long-term growth of 6.8%, but not a forecast growth rate of 6.15% today.

418 **Q. Do you have any concern that Mr. Gorman also relied on a sustainable growth DCF**
419 **model?**

420 A. No, as long as it is correctly applied. Sustainable growth, or earnings retention growth, is
421 premised on the notion that future dividend growth depends on both internal and external
422 financing. Mr. Gorman's sustainable growth model understates the cost of equity for both the
423 gas and electric samples because it ignores the external growth component.

424 **Q. What would Mr. Gorman's sustainable growth DCF model results have been had he**
425 **included the external growth component?**

426 A. The average and median DCF costs would have been 10.84% and 10.45% for the electric
427 sample and 10.23% and 9.89% for the gas sample (Ameren Exhibit 36.0, Schedule 8 pages 1 and
428 2)

¹⁸ Per Blue Chip *Economic Indicators*, October 2001, the long-term expected growth rate in the economy was 5.4%, compared to the 5.0% cited by Mr. Gorman at p. 34 of his testimony in this proceeding.

429 **Q. If Mr. Gorman had given equal weight to all three of his DCF estimates, including**
430 **the sustainable growth model as corrected to include the external growth component, what**
431 **would the average cost of equity be?**

432 A. The results are summarized in the table below.

433 **Table 8**

	As Filed by Gorman		As Revised	
	Electric	Gas LDC	Electric	Gas LDC
Constant Growth DCF Model (Analysts' Growth)	12.19%	10.36%	12.19%	10.36%
Constant Growth DCF Model (Sustainable Growth)	10.48%	9.62%	10.64%	10.06%
Multi-Stage Growth DCF Model	11.08%	9.96%	11.08%	9.96%
DCF Return – Gorman	10.78%	9.79%		
Average of All Models			11.30%	10.13%

434 The resulting revised average DCF costs of equity are 11.3% for the electric sample and 10.13%
435 for the gas sample. These results are approximately 50 basis points (electric) and 35 basis points
436 (gas) higher than obtained by ignoring the constant growth model and the external growth
437 component of the sustainable growth model.

438 **Q. Do you have any issues with Mr. Gorman's application of the Capital Asset Pricing**
439 **Model?**

440 A. Yes, my primary concern is with his estimate of the market risk premium which he
441 estimates to be in the range of 5.8% to 6.0%, compared to my estimates of 6.25% to 6.5% based
442 on historic values and 6.8% (as updated for current capital market conditions, discussed below)
443 based on a forward-looking DCF estimate for the market.

444 **Q. How does Mr. Gorman estimate his market risk premium?**

445 A. It is based on two approaches, a forward looking estimate and an estimate based on a
446 long-term historical average.

447 **Q. Please describe the first estimate.**

448 A. The first estimate combines the arithmetic average historic (1926-2008) real return on the
449 market (8.5%) and the consensus forecast (2.1%) of consumer price inflation to arrive at a
450 forecast nominal market return. Mr. Gorman's resulting estimate of the equity market return is
451 10.78%. His estimate of the market risk premium is the difference between the 10.78% and his
452 forecast 30-year Treasury bond yield of 5.0%, or 5.78%.

453 **Q. Do you agree with this approach?**

454 A. No. Combining the average real return achieved on the market with expected inflation
455 would be appropriate if there were any evidence that the expected return on the market moves in
456 tandem with the rate of inflation. There is no evidence based on the historic market results that it
457 does. There has been no positive correlation between inflation and actual market returns
458 historically. In fact, equity market returns have generally been higher when inflation was lower
459 as the Table below demonstrates.

460 **Table 9**

Inflation Range	Nominal Equity Return	Average Rate of Inflation	Real Equity Return
Less than 1%	12.3%	-2.1%	14.6%
1-3%	18.2%	2.0%	15.9%
3-5%	6.0%	3.7%	2.2%
Over 5%	7.0%	8.2%	-1.1%
Average 1926-2008	11.7%	3.1%	8.4%

461
462 The table shows that (1) the average rate of inflation over the entire period 1926-2008
463 was 3.1%, which is higher than the expected rate of inflation (2.1%) and (2) when inflation was

464 in the range of 1-3%, that is, similar to the consensus forecast rate of inflation of 2.1%, the
465 arithmetic average real rate of return was 15.9%, considerably higher than the historic average
466 real rate of 8.5% which Mr. Gorman uses to estimate the market return. From these
467 relationships, a more reasonable conclusion would be that investors would expect the nominal
468 rate of return to be no less than the historic average nominal rate of return (11.7%). Based on
469 Mr. Gorman's forecast 30-year Treasury bond yield of 5.0%, the indicated equity risk premium
470 would then be 6.7%, significantly higher than his estimated 5.78%.

471 **Q. How does Mr. Gorman perform his second estimate of the market risk premium?**

472 A. According to his testimony (IIEC Exhibit 2.0, page 45), "The historical market risk
473 premium was also estimated by Morningstar in *Stocks, Bonds, Bills and Inflation 2009 Yearbook*.
474 Over the period 1926 through 2008, Morningstar's study estimated that the arithmetic average of
475 the achieved total return on the S&P 500 was 11.70%, and the total return on long-term Treasury
476 bonds was 6.10%. The indicated equity risk premium is 5.60% (11.70% - 6.10% = 5.60%)."

477 **Q. Does Mr. Gorman's calculation comport with the way that Morningstar estimates**
478 **the equity risk premium from historical data?**

479 A. No. Morningstar makes very clear that total returns on Treasury bonds are not the
480 appropriate measure of the risk-free rate for purposes of estimating the market equity risk
481 premium. Morningstar states,

482 Another point to keep in mind when calculating the equity risk
483 premium is that the income return on the appropriate-horizon Treasury
484 security, rather than the total return, is used in the calculation. The
485 total return is comprised of three return components: the income
486 return, the capital appreciation return, and the reinvestment return. The
487 income return is defined as the portion of the total return that results
488 from a periodic cash flow or, in this case, the bond coupon payment.
489 The capital appreciation return results from the price change of a bond
490 over a specific period. Bond prices generally change in reaction to

491 unexpected fluctuations in yields. Reinvestment return is the return on
492 a given month's investment income when reinvested into the same
493 asset class in the subsequent months of the year. The income return is
494 thus used in the estimation of the equity risk premium because it
495 represents the truly riskless portion of the return.¹⁹

496 **Q. Mr. Gorman says that he disagrees with that approach²⁰ because “because it does**
497 **not reflect a true investment option available to the marketplace and therefore does not**
498 **produce a legitimate estimate of the expected premium of investing in the stock market**
499 **versus that of Treasury bonds.” What is your response?**

500 A. The proper application of the Capital Asset Pricing Model requires that the expected
501 market return be measured in relation to the risk-free rate. The fact that the total returns on
502 Treasury bonds differ from their income return simply demonstrates that they are not risk-free;
503 they are subject to interest rate risk. The income return portion of the Treasury bond return is the
504 closest proxy for the risk-free rate and should be used to apply the CAPM.

505 **Q. What is the impact on the estimated market risk premium of using the income**
506 **return on Treasury bonds as the proxy for the risk-free rate instead of the total return?**

507 A. The income return reported by Morningstar is 5.2%; the historic equity market return is
508 11.7% and the resulting equity risk premium is 6.5%.

509 **Q. Mr. Gorman claims his market risk premium estimate of 5.8% to 6.0% is**
510 **reasonable based on all of Morningstar's estimates. Do you agree?**

511 A. No. Mr. Gorman compares his estimate to several other calculations provided by
512 Morningstar, including a premium based on the New York Stock Exchange rather than the S&P

¹⁹ Morningstar, *2009 Ibbotson Stocks, Bonds, Bills and Inflation Valuation Edition*, page 58.

²⁰ Mr. Gorman critiques my use of income returns (IIEC Exhibit 2.0, pages 70-71). The rebuttal to Mr. Gorman's application of the CAPM addresses this criticism.

513 500 (6.25%), a premium based on only the two top deciles (largest companies) of the New York
514 Stock Exchange (5.8%) and a supply-side risk premium (5.8%).

515 While I have no issue with using the premium based on the New York Stock Exchange,
516 the premium based only on the largest companies of the New York Stock Exchange does
517 understate the risk premium for the equity market as a whole. Morningstar recognizes that the
518 Decile 1-2 series will result in a lower risk premium than the other series as the larger companies
519 have historically had lower returns, resulting in a lower achieved risk premium.²¹ The
520 application of the Capital Asset Pricing Model should capture the expected return and risk
521 premium for the total equity market, not just the largest stocks.

522 With respect to the supply-side estimate cited by Mr. Gorman, Morningstar presents this
523 model and its results as part of a discussion of issues respecting the equity risk premium that, if
524 correct, would reduce its size. The supply-side risk premium method attempts to measure the
525 risk premium based on inflation, real earnings growth and income. Effectively it removes the
526 impact that rising price/earnings ratios have had on the total market returns historically.
527 Morningstar does not recommend the use of the supply-side premium and notes at the end of its
528 discussion of the various equity risk premium issues that “This section has briefly reviewed some
529 of the more common arguments that seek to reduce the equity risk premium. While some of
530 these theories are compelling in an academic framework, most do little to prove that the
531 [historic] equity risk premium is too high.”²²

532 **Q. Mr. Gorman also does a multi-stage DCF model to support his risk premium**
533 **estimate. Does this estimate make any sense?**

²¹ *Op. cit.*, Morningstar, page 56.

²² *Op. cit.*, Morningstar, page 70, emphasis added.

534 A. No. Mr. Gorman's two-stage DCF model applied to the equity market as a whole results
535 in return for the market of 8.7% (page 49) and an equity market risk premium of 3.7%. This
536 model assumes that investors expect that analysts' forecasts of growth (range of 9.5% to 10.1%)
537 will persist for ten years and that growth will then drop precipitously to the expected nominal
538 rate of growth in the economy (5.0%). The resulting 8.7% cost of equity is, illogically, well
539 below Mr. Gorman's multi-stage DCF estimates for both the electric and gas samples. The
540 nonsensical result provides no insight into the reasonableness of Mr. Gorman's equity market
541 risk premium estimate.

542 **Q. Have you estimated the market risk premium using a DCF approach?**

543 A. Yes. One of my two estimates of the market risk premium relies on a constant growth
544 DCF model similar to that used by Ms. Freetly in her CAPM. As updated (discussed below), my
545 constant growth DCF model indicates an expected market return of 12.0% and a market equity
546 risk premium of 6.8%. My DCF estimate of the equity market return and market risk premium
547 suggests that investors expect the future equity market returns and equity risk premiums to be in
548 line with their historic experience over the longer-term.

549 **Q. What is your conclusion regarding Mr. Gorman's estimate of the market equity risk**
550 **premium?**

551 A. Based on the adjustments to his two approaches, his equity risk premium should be in the
552 range of 6.25% to 6.5% based on the two historic S&P and NYSE estimates published by
553 Morningstar and 6.7% based on the revised forward-looking estimate, for an overall estimate of
554 approximately 6.5%.

555 **Q. What would Mr. Gorman's CAPM estimates be based on a market risk premium of**
556 **6.5%?**

557 A. The table below summarizes the results.

558 **Table 10**

Sample	Risk-Free Rate	Beta	Market Risk Premium	Cost of Equity
Electric	5.0%	0.75	6.5%	9.9%
Gas	5.0%	0.68	6.5%	9.4%

559 **Q. Please summarize the revised results of the Mr. Gorman's DCF and CAPM results**
560 **for his two samples.**

561 A. The revised estimates and averages of the DCF and CAPM results are presented in the
562 table below. The resulting revised estimates are 50 and 40 basis points higher for the electric and
563 gas operations respectively than the 10.1% and 9.4% costs of equity calculated by Mr. Gorman.

564 **Table 11**

	As Revised	
	Electric	Gas LDC
DCF	11.30%	10.13%
CAPM	9.9%	9.4%
Average	10.6%	9.8%

565 **Q. Mr. Gorman calculates a weighted average of the electric and gas results and**
566 **recommends the same return on equity for both the electric and gas operations of the**
567 **Ameren Utilities. Do you agree with this approach?**

568 A. No. The return that is allowed for the electric utility operations should reflect the cost of
569 equity for electric utility operations and the return that is allowed for the gas utility operations
570 should reflect the cost of equity for gas utility operations. The fact that the Ameren Utilities are
571 combination gas and electric utilities does not mean that the same cost of equity applies to each
572 of those operations. If the Ameren Utilities were combination electric utility and unregulated

573 generation companies, it clearly would not be reasonable to apply the weighted average cost of
574 equity of these two operations to both electric utility and unregulated generation operations. To
575 do so would result in cross-subsidies, erroneous investment decisions, and a misallocation of
576 capital resources. The same conclusion holds for electric and gas utility operations.

577 **Q. With the revisions that you have made to Mr. Gorman's test results, do you**
578 **conclude that the results are reasonable?**

579 A. No, they still underestimate the cost of equity because they do not take account of the
580 higher financial risk of the Ameren Utilities inherent in the ratemaking capital structures relative
581 to the financial risk of the sample companies as reflected in their market value capital structures
582 prevailing over the periods relevant to the estimates of the cost of equity (stock prices for DCF
583 and betas for CAPM).

584 **V. RESPONSE TO MR. THOMAS**

585 **Q. What are the returns on equity that Mr. Thomas recommends?**

586 A. He recommends returns on equity of 8.76% and 7.97% for the electric and gas utility
587 operations, respectively, of the Ameren Utilities. While he performs a CAPM test for
588 comparative purposes, he does not factor the results into his recommendations.

589 **Q. What is your reaction to the recommended returns on equity of Mr. Thomas?**

590 A. His recommended returns are inadequate on their face, and clearly do not meet the
591 criteria for a fair return. Returns on equity of 8.76% and 7.97% would not be sufficient to
592 maintain the financial integrity of the Ameren Utilities; they would not allow the utilities to
593 attract capital as required on reasonable terms, and they certainly would not meet the comparable
594 returns standard.

595 A comparison of Mr. Thomas' recommended returns with those recently allowed by U.S.
596 regulators is telling. The average returns that have been allowed by regulators for electric and
597 gas utilities since the beginning of 2007 have averaged 10.4% and 10.3% respectively.²³ Mr.
598 Thomas' recommendation for the electric utility operations of the Ameren Utilities is 165 basis
599 points lower than the average allowed return for electric utilities and 230 basis points lower than
600 the average allowed return for gas distribution utilities. If the returns recommended by Mr.
601 Thomas are fair and reasonable, then regulators as a group have been very wrong in their
602 interpretation of the evidence that has been presented to them.

603 Mr. Thomas refers several times to the financial crisis, which he describes as the worst
604 since the Great Depression, the chaotic state of the capital markets and the uncertainty in investor
605 expectations. That these circumstances would point, in Mr. Thomas' mind, to reductions to the
606 current allowed returns of the Ameren Utilities on the order of 190 (electric) and 270 (gas) basis
607 points defies logic.

608 Acceptance of Mr. Thomas's recommendations would be a signal to the investment
609 community that the ability to attract capital on reasonable terms and conditions, the maintenance
610 of financial integrity and the opportunity to earn a return commensurate with those of
611 comparable risk firms are of little or no relevance.

612 The cost of capital is a real cost to the utility. The return on capital represents the
613 compensation investors require to make available the funds necessary to build, grow and
614 maintain the infrastructure necessary to deliver services essential to the economic well-being of a
615 region. A just and reasonable return on the capital provided by investors not only fairly
616 compensates the investors who have put up, and continue to commit, the funds necessary to

²³ Regulatory Research Associates, *Regulatory Focus: Major Rate Case Decisions – January-September 2009*, October 2, 2009.

617 deliver service, but benefits all stakeholders, especially ratepayers. A fair and reasonable return
618 on the capital invested in an electric or gas utility provides the basis for attraction of capital for
619 which investors have alternative investment opportunities. Fair compensation on the capital
620 committed to the utility provides the utility with the financial means to pursue technological
621 innovations and build the infrastructure that is required to support long-term growth in the
622 underlying economy.

623 An inadequate return, on the other hand, undermines the ability of a utility to compete for
624 investment capital. Moreover, inadequate returns act as a disincentive to expansion within the
625 service area, may potentially degrade the quality of service or deprive existing customers from
626 the benefit of lower unit costs which might be achieved from growth. In short, if the utility is not
627 provided the opportunity to earn a fair and reasonable return, it may be prevented from making
628 the requisite level of investments in the existing infrastructure in order to reliably provide utility
629 services for its customers. Acceptance of Mr. Thomas's recommendations would signal to the
630 investment community, both debt and equity, that they should direct their future capital
631 investments elsewhere.

632 **Q. How does Mr. Thomas perform his DCF test?**

633 A. He relies on a multi-stage model. In the first stage of his model, his growth rates are
634 determined by historic (last five years) internal growth (retention rate X ROE or "br"). In the
635 third stage, he assumes that investors expect growth to be equal to the real rate of growth in the
636 economy. The second stage is a transitional stage in which Mr. Thomas assumes that historic
637 internal growth will trend toward real growth in the economy.

638 **Q. Are Mr. Thomas's assumptions reasonable?**

639 A. No. The choice of historical period used to measure internal growth for the first stage is
640 purely subjective and has no objective link to investor expectations embedded in current stock
641 prices. The fact that there may be more uncertainty surrounding investors' expectations (and
642 thus more perceived risk) is no excuse to substitute historic internal growth rates for more
643 objective estimates of investor growth expectations which are reflected in analysts' growth
644 forecasts. To the extent that history is relevant, it is already taken into account in forecasts of
645 growth.

646 With respect to the long-term growth rate, which Mr. Thomas equates to the real growth
647 in the economy, that rate fails to consider that investors require both a real return as well as
648 compensation for inflation. Thus the long-term rate of growth that investors might anticipate is
649 significantly understated.

650 These two serious flaws in Mr. Thomas's DCF estimates require that the Commission
651 reject Mr. Thomas's recommended returns on equity.

652 **Q. Although Mr. Thomas does not rely on the results of the CAPM in arriving at his**
653 **recommendation, he does perform a CAPM test. Please comment on the results.**

654 A. Mr. Thomas's CAPM results are based on a current risk-free rate (4.25%), an unadjusted
655 beta (0.63 for the electric utilities and 0.37 for the gas utilities) and a market risk premium of
656 5.0%. Based on Mr. Thomas's CAPM, the cost of equity would be 7.4% for the electric utilities
657 and 5.85% for the gas utilities. The indicated returns on equity for both samples are barely
658 above the long-term cost of debt for the utilities. During the week used by Mr. Thomas to
659 measure the risk-free rate by reference to the current yield on long-term Treasury bonds for the
660 purpose of applying the CAPM, the yields on long-term Baa and A rated utility bonds (which are
661 representative of the costs of debt for the electric and gas utility samples respectively) averaged

662 6.1% and 5.5%.²⁴ The minimal premiums above the cost of debt indicated by Mr. Thomas's
663 CAPM results underscore the unreasonableness of Mr. Thomas' inputs to the model.

664 **Q. Mr. Thomas claims that unadjusted betas should be used because there is no**
665 **evidence that utility betas trend toward the market mean of 1.0, which is the premise of the**
666 **adjustment. Do you agree with his conclusion?**

667 A. No. Whether or not utility betas trend toward 1.0, the adjustment is still required. The
668 purpose of applying the CAPM (as with any test for estimating the cost of equity) is to estimate
669 the return that investors require or expect. There is significant empirical evidence that the
670 application of the CAPM using "raw" or unadjusted betas underestimates the returns of low beta
671 stocks (less than 1.0) and overestimates returns of high beta stocks (greater than 1.0). The
672 adjustment to "raw" beta corrects for the empirically observed relationships between betas and
673 returns.

674 **Q. What concerns do you have with Mr. Thomas's estimate of the market risk**
675 **premium?**

676 A. Mr. Thomas uses a market risk premium of 5.0%, which he characterizes as the upper
677 bound of the academic evidence. The range of his estimate is 3.0% to 5.0%, which is based on a
678 number of studies that contend that the risk premium in the future will be lower than it was
679 historically. Some of the market research on the equity risk premium to which Mr. Thomas
680 refers was an outgrowth of the equity market bubble that was experienced during the mid-to late-
681 1990s. The significant market gains during the bubble were instrumental in leading both
682 academics and practitioners to question the ability of the U.S. equity market to continue to
683 sustain returns similar to those that had been achieved historically. The significant market

²⁴ Average daily yields for the week of September 21st to 25th 2009.

684 correction experienced in 2002 and the subsequent equity market meltdown during the recent
685 financial crisis calls into question the whole notion that investors would reasonably require
686 equity market returns and premiums that are at the levels relied upon by Mr. Thomas. As noted
687 in my rebuttal to Mr. Gorman, Morningstar analyzed the various arguments that, if correct,
688 would reduce the market equity risk premium and concluded that “While some of these theories
689 are compelling in an academic framework, most do little to prove that the [historic] equity risk
690 premium is too high.” Moreover, the very authors who are cited for first raising what is
691 sometimes referred to as the “equity risk premium puzzle”, themselves revisited the equity risk
692 premium, and, after assessing the data, arrived at the conclusion that over the long horizon, the
693 equity premium is likely to be similar to what it was in the past.²⁵

694 The historic evidence alone supports a market risk premium in the 6.25% to 6.5% range,
695 and as per my updates, discussed below, a current forward looking DCF estimate of the expected
696 equity market return supports a market equity risk premium of 6.8%.

697 **Q. Based on your review of Mr. Thomas’s CAPM approach, does his analysis provide**
698 **any insight into a fair and reasonable return for the Ameren Utilities?**

699 A. No.

700 **VI. UPDATES TO DIRECT EVIDENCE**

701 **Q. Before you address the critiques that Staff and the intervenors have made of your**
702 **direct testimony, would you please provide any updates you have made?**²⁶

²⁵ Rajnish Mehra and Edward C. Prescott, “The Equity Premium in Retrospect”, *Handbook of the Economics of Finance*, Elsevier BV, 2003.

²⁶ Mr. Gorman criticized my application of the DCF test on the basis that my estimates do not reflect current market conditions (IIEC Exhibit 2.0, page 62). The update addresses this criticism.

703 A. When I initially prepared my direct testimony, the capital markets were in considerable
 704 turmoil due to the worst financial crisis since the Great Depression. The economy was in
 705 recession and the timing and the robustness of a recovery was uncertain. The cost of capital had
 706 risen markedly as risk had been repriced across a broad range of financial securities. Since the
 707 time the testimony was filed, capital market and economic conditions have improved
 708 significantly, as the Federal Government’s massive economic stimulus package appears to have
 709 met with some success, although the recovery remains fragile. Given the material changes in the
 710 capital markets, I have updated my estimates of the cost of equity to reflect current conditions
 711 and expectations.

712 I have updated my DCF tests through mid-September 2009. (Ameren Exhibits 12G.4 to
 713 12G.6 Updated and Ameren Exhibits 12E.4 to 12E.6 Updated) The table below summarizes the
 714 initial and updated results.

Table 12

DCF Test	Gas		Electric		
	Initial Results	Updated Results	Initial Results	Updated Results	
Constant Growth: I/B/E/S Growth Forecasts	Mean	10.5%	10.4%	13.9%	12.9%
	Median	11.0%	9.9%	13.2%	11.8%
Constant Growth: Sustainable Growth Forecasts	Mean	11.2%	10.2%	12.2%	10.6%
	Median	10.6%	9.5%	11.3%	10.2%
Three-Stage:	Mean	10.3%	9.8%	12.6%	11.5%
	Median	10.4%	10.0%	12.1%	10.8%

716 For the risk premium tests (CAPM, historic risk premium and DCF-based risk premium),
 717 I have updated my estimates of the 30-year Treasury yield over the next five years (2010-2014)

718 as well as over the longer-term (2011-2020) to 5.2% and 5.5%, respectively.²⁷ My updates
719 reflect the latest available forecasts for the 30-year Treasury yield as presented in Blue Chip
720 *Financial Forecasts* of June 2009 and September 2009. These forecasts indicate that, over the
721 next five years (2010-2014), 30-year Treasury yields are expected to be slightly higher than was
722 anticipated at the time my original testimony was prepared.

723 For the application of the CAPM, I have also updated the *Value Line* betas for the electric
724 sample and the forward-looking market risk premium for both my gas and electric samples. The
725 updated mean and median *Value Line* betas for the gas sample are unchanged at 0.67 and 0.65,
726 respectively. (Ameren Exhibit 12G.3.1 Updated) The updated mean and median *Value Line*
727 betas for the electric sample have risen from 0.72 and 0.71, respectively, to 0.74 and 0.75,
728 respectively (Ameren Exhibit 12E.3.1 Updated).

729 With respect to the forward-looking market risk premium, estimated by applying the
730 discounted cash flow model to the S&P 500, based on a dividend yield for the S&P 500 of 2.1%
731 (August 31, 2009) and a consensus I/B/E/S forecast of five-year growth of 9.63% (August 2009),
732 the resulting expected market return is 12.0%.²⁸ At a forecast 30-year Treasury yield of 5.2%,
733 the forward-looking estimate of the market risk premium would be approximately 6.8%. The
734 resulting forward CAPM return on equity is estimated at 9.7%²⁹ for the gas sample and 10.3%³⁰
735 for the electric sample.

736 There were no changes to my estimates of the historic risk premium (6.25% to 6.50%)
737 and the historic utility risk premium (5.5%). Based on the updated long-term forecast of the 30-

²⁷ In my direct testimony, I forecast the 30-year Treasury yield to yield 4.7% over the period 2009-2013 and 5.6% over the period 2011-2020.

²⁸ $12.0\% = 2.12\% * (1+9.63\%)+ 9.63\%$

²⁹ $9.7\% = 5.2\% + 0.66*(12.0\% - 5.2\%)$.

³⁰ $10.3\% = 5.2\% + 0.75*(12.0\% - 5.2\%)$.

738 year Treasury yield of 5.5% and *Value Line* betas of 0.66 and 0.75 for the gas and electric
739 samples, the historic CAPM return on equity is estimated at 9.8% for the gas sample and 10.4%
740 for the electric sample. The historic utility risk premium cost of equity is estimated at 11.0%.

741 I have also updated my historic equity risk premium for utilities relative to utility bond
742 yields. My estimates of the historic equity risk premium for utilities relative to long-term A-
743 rated public utility bonds and Baa-rated public utility bonds remain unchanged at 4.5% and
744 4.25%, respectively. The historic (1953-current) spread between A-rated public utility bond
745 yields and 30-year Treasury bond yields remains unchanged at 130 basis points. Similarly, the
746 historic spread between Baa-rated public utility and 30-year Treasury bond yields remains at
747 approximately 165 basis points. Adding these spreads to my updated long-term 30-year
748 Treasury yield of 5.5% results in a forecast A-rated utility bond yield of 6.8% and a Baa-rated
749 utility bond yield of 7.2%. The resulting required equity returns based on historic utility equity
750 risk premiums are 11.3% and 11.5% for the gas and electric samples respectively.

751 The DCF-based risk premium study was updated through August 2009. The indicated
752 average risk premium above A-rated public utility bond yields for the gas utility sample over the
753 period August 2007 to August 2009 was 3.2%; the risk premium above Baa-rated public utility
754 bond yields for the electric utility sample was 4.5%. The spread between long-term A-rated
755 public utility bonds and the long-term Treasury yields has averaged over 200 basis points over
756 the period August 2007 to August 2009. For long-term Baa-rated utility bond yields, the spread
757 averaged almost 300 basis points over the same period. However, these spreads have fallen
758 sharply since my initial testimony was prepared and now stand at approximately 135 and 200
759 basis points. Adding the current spreads to the forecast 2010-2014 30-year Treasury yield of
760 5.2% produces forecast A-rated and Baa-rated public utility bond yields of approximately 6.55%

761 and 7.2%, respectively. The resulting indicated costs are 9.75% and 11.7% for the gas and
762 electric utility samples, respectively. (Ameren Exhibit 12G.8 Updated and Ameren Exhibit
763 12E.8 Updated)

764 Based on the updates to my filed testimony, the results of the various tests indicate a
765 required equity return as applied to the proxy sample of natural gas LDCs of approximately
766 10.2%. The results of the various tests indicate a required equity return for the proxy sample of
767 electric utilities of approximately 11.1%.

768 Finally, I updated the market value capital structures to incorporate prices as of mid-
769 September (Ameren Exhibit 12G.9 Updated and Ameren Exhibit 12E.9 Updated). These
770 changes are reflected in the table below:

771 **Table 13**

Test	Gas		Electric	
	Market Value Equity Ratio as Filed (Corrected)	Market Value Equity Ratio Updated	Market Value Equity Ratio as Filed (Corrected)	Market Value Equity Ratio Updated
DCF	55.0%	58.0%	44%	48%
CAPM	60.0%	60.0%	55%	55%
DCF- Based RP	60.0%	60.0%	54%	53%

772 Ameren Exhibit 36.0, Schedule 9, pages 1 and 2 summarizes the results of the various
773 tests adjusted for the Ameren Utilities' equity ratios as filed and updated.

774 **Q. What are the costs of equity for the gas and electric operations of the Ameren**
775 **Utilities based on the updated results of your various tests?**

776 A. The table below summarizes the costs of equity as updated:

777

Table 14

	Gas	Electric
CILCO	11.2%	11.7%
CIPS	10.8%	11.3%
IP	11.2%	11.7%

778 **VII. RESPONSE TO CRITICISMS OF STAFF AND INTERVENORS**

779 **Q. What criticisms do Staff Witness Ms. Freetly and the Intervenors make with respect**
780 **to your estimate of the cost of equity?**

781 A. The criticisms of my testimony that have not already been addressed above in response to
782 Staff and Intervenor Direct Testimony or in the updates are as follows:

- 783 • The use of historical data in my DCF and risk premium analyses;
- 784 • The optimism of analysts' forecasts;
- 785 • The use of forecast interest rates in the application of the risk premium
786 tests;
- 787 • The adjustment of the DCF and risk premium results to compensate for the
788 difference between market value and book value; and
- 789 • The use of the comparable earnings test as a check on the results of the
790 DCF and risk premium test results.

791 **Q. Please response to these criticisms.**

792 A. I will address each criticism in turn.

793 Use of Historical Price Data in the DCF Test

794 Ms. Freetly critiques my use of historic data, as regards the use of an average rather than
795 a "spot" stock price in applying the DCF test. In theory, I do not disagree with her conclusion
796 that the most recent stock price reflects the most recent information, and that older prices would

797 reflect obsolete information. However, on any given day, the price of a stock may rise or fall in
798 response to information or events that are transitory in nature and which are quickly reversed.
799 Further, the price that is used to estimate the DCF cost of equity is typically combined with a
800 corresponding growth rate forecast, which, although the most recent available, may have been
801 prepared and disseminated much earlier. The combination of a “spot” stock price and non-
802 coincident growth forecast would lead to a mismatch between the price and investor growth
803 expectations, and thus an erroneous DCF cost. Using an average daily price over a relatively
804 short period of time as I have done (one month) mitigates both potential problems.

805 Use of Historical Data in the Equity Risk Premium Tests

806 Ms. Freetly also criticizes the use of historical data in developing the market and utility
807 equity risk premiums. While the market risk premium is a forward-looking concept, it is not
808 reasonable to expect investors to ignore returns that they have achieved historically when
809 forming their expectations regarding the equity market return going-forward. Ms. Freetly herself
810 incorporates historical data in her CAPM analysis as historical data are used to calculate the beta.

811 An analysis of rolling 10-year averages for achieved equity market and utility equity
812 returns reveals no discernible trend over the periods 1926 to 2008 (equity market returns) and
813 1947 to 2008 (equity market and utility equity returns); see Ameren Exhibit 36.0, Schedules 5
814 and 6. If there was a noticeable trend in the achieved returns over time, it would be reasonable to
815 argue that history should be ignored or adjusted when used to estimate the expected equity
816 market returns for either the market as a whole or for the utility sectors. However, in the absence
817 of a discernable trend, historic returns provide a relevant perspective on the returns that investors
818 may reasonably expect over the longer-term.

819 As stated in Morningstar's 2009 Ibbotson Stocks, Bonds Bills and Inflation Valuation
820 Yearbook (pages 60 to 61)

821 Implicit in using history to forecast the future is the assumption that investors'
822 expectations for future outcomes conform to past results. This method assumes
823 that the price of taking on risk changes only slowly, if at all, over time. This
824 "future equals the past" assumption is most applicable to a random time-series
825 variable. A time-series variable is random if its value in one period is independent
826 of its value in other periods.

827 Ibbotson goes on to explain that

828 A statistical measure of the randomness of a return series is its serial correlation.
829 Serial correlation or autocorrelation) is defined as the degree to which the return
830 of a given series is related from period to period.

831 Their analysis indicates that both stock returns and equity risk premiums have little serial
832 correlation³¹ and

833 thus the realized equity risk premium next year will not be dependent on the
834 realized equity risk premium from this year. That is, there is no discernable
835 pattern in the realized equity risk premium-it is virtually impossible to forecast
836 next year's realized risk premium based on the premium of the previous year.

837 As a result, "The best estimate of the expected value of a variable that has behaved
838 randomly in the past is the average (or arithmetic mean) of its past values."

839 Optimism of Analysts' Forecasts

840 Mr. Thomas criticizes the use of analysts' forecasts primarily on the grounds that studies
841 he cites found analysts' earnings forecasts to be optimistic and concludes that using analysts'
842 forecasts only will overstate the cost of capital estimate produced by the DCF. It is important to
843 recognize that do not only use investment analysts' earnings forecasts. I rely on three separate
844 DCF estimates: (1) a constant growth model which relies on analysts' earnings forecasts; (2) a

³¹ Ibbotson calculated the serial correlation for both stock returns and the market equity risk premium at 0.04, where 1.0 means that the value of the variable is predictable from one period to the next and positively related.

845 sustainable growth model; and (3) a multi-stage model that incorporates both analysts' forecasts
846 and nominal GDP growth as a proxy for growth in the longer-term. By giving weight to all
847 three, my DCF estimates incorporate the potential range of utility investors' expected returns.

848 With respect to studies which have addressed analyst optimism, these analyses have with
849 growth forecasts generally (i.e., growth forecasts for companies in all industries), not growth
850 forecasts for utilities specifically. Indeed, a study entitled "The Level and Persistence of Growth
851 Rates", *Journal of Finance*, Vol. LVIII, No. 2, 2003 by Louis C. Chan, Jason Karceski and Josef
852 Lakonishok, which divided all U.S. stocks with available I/B/E/S long-term growth rates into
853 value-weighted portfolios, found that the portfolios of companies with the highest forecast
854 growth rates achieved growth rates lower than those which had been forecast five years
855 previously, but the lowest growth portfolio (where utilities would fall) did not exhibit the same
856 tendency. This outcome would not be unexpected, as the operating environment and business
857 model for utilities are more transparent and predictable than that of many other industries, for
858 example, high tech firms.

859 Use of Forecast Interest Rates in Risk Premium Studies

860 Mr. Gorman criticizes my risk premium studies for (1) using a long-term forecast of
861 interest rates in conjunction with the historic risk premiums and (2) using forecasts of utility
862 bond yields in my equity risk premium tests.

863 With respect to the first criticism, in conducting my equity risk premium tests by
864 reference to historic average returns and risk premiums for both the market as a whole and for
865 utilities (AmerenCILCO, AmerenCIPs and AmerenIP Exhibits 12.0G and 12.0E, Sections
866 V.C.2.d.3 and V.C.2.e.3), I combined a long-term average risk premium with long-term average
867 expected bond yields (Treasury bond and utility bonds as relevant to the specific version of the

868 test). Mr. Gorman contends that only interest rates expected to prevail over the period the rates
869 for the Ameren Utilities are expected to be in place should be used, not interest rates expected to
870 prevail beyond the rate effective period.

871 The rationale for using long-term average expected interest rates relates to the very nature
872 of the risk premium estimates. The use a historical average risk premiums to develop a forward
873 looking cost of equity implicitly assumes that the risk premium will be constant over a business
874 or interest rate cycle. However, the equity risk premium varies over the cycle, trending up when
875 the economy deteriorates and down when the economy is buoyant and expanding. As a result,
876 by its very nature, the combination of a historic risk premium with a spot interest rate, specific to
877 particular point in the cycle, will necessarily result in an under or overestimation of the cost of
878 equity at any given point in time. Combining a forecast long-term average interest rate with the
879 long-term average risk premium produces an estimate of the cost of equity that matches the
880 constancy of the equity risk premium implied by the use of historic averages with a similarly
881 estimated interest rate.

882 Mr. Gorman also takes issue with using forecasts of utility bond yields specifically in my
883 application of the equity risk premium tests. Mr. Gorman himself uses forecasts of long-term
884 Treasury interest rates in the CAPM. I fail to see why using forecast Treasury bond yields in the
885 application of the CAPM is appropriate, but using forecasts of utility bond yields in the
886 application of equity risk premium tests, as I have done, is not. If, as the economy recovers,
887 long-term Treasury bond yields are expected to rise, then utility bond yields would also be
888 expected to rise. My analysis appropriately incorporates the impact of the expected increase in
889 long-term Treasury bond yields on the corresponding utility bond yields.

890 Adjustment for Market Value Capital Structure

891 Ms. Freetly argues that the market to book adjustment is based on a “flawed argument”
892 that the market-derived required rate of return does not produce a “fair return”.³² I do not agree.

893 Financial literature clearly establishes the following:

- 894 • The higher the financial risk faced by a company, the higher is the
895 required rate of return on equity, and
- 896 • The cost of capital is determined by reference to market value capital
897 structures.

898 No financial analyst would disagree with the first proposition. Nor would he or she
899 disagree with the basic proposition that, if a utility faces similar business risk to a proxy sample
900 of companies, but higher financial risk than the proxy sample, the utility’s cost of equity is
901 higher. The question then becomes how to measure the differences in financial risk for purposes
902 of estimating the utility’s cost of equity from an equity investor’s perspective.

903 Finance texts prescribe reliance on market values of debt and equity for purposes of
904 estimating the cost of capital. For example, in *Principles of Corporate Finance*, Eighth Edition,
905 Boston, MA: Irwin McGraw Hill, 2006, at page 504, Richard Brealey, Stewart Myers, and
906 Franklin Allen, caution against using book values when calculating the weighted average cost of
907 capital:

908 Why did we show the book balance sheet? Only so you could draw a
909 big X through it. Do so now.

910 When estimating the weighted-average cost of capital, you are not
911 interested in past investments but in current values and expectations
912 for the future.

913 From an equity investor’s perspective, the risk of his investment is
914 determined by the variance of the expected market return. The

³² Mr. Gorman and Mr. Thomas make similar arguments.

915 variance of the return, in turn, is a function of financial risk, where the
916 financial risk is measured using market value capital structures. The
917 beta, for example, which measures the covariability of a stock's
918 returns with those of the market, reflects the stock's market value
919 capital structure, not its book value capital structure.

920 At page 57, Ms. Freetly states:

921 The intrinsic financial risk of a given company does not change simply because
922 the manner in which it is measured has changed. Such an assertion is akin to
923 claiming that the ambient temperature changes when the measurement scale is
924 switched from Fahrenheit to Celsius. Specifically, capital structure ratios are
925 merely indicators of financial risk; they are not sources of financial risk.
926 Financial risk arises from contractually required debt service payments.
927 Changing capital structure ratios from a market to book value basis does not
928 affect a company's debt service requirements.

929 While I agree that the company's debt service requirements have not changed as a result
930 of a change in the method of calculating the capital structure ratios, the financial risk from an
931 equity shareholder's perspective changes when the market value capital structure changes.

932 The logic is easier to understand if I use the illustration of a mortgage on a house.
933 Suppose I own a house which I bought for \$80,000 and which is now worth \$100,000. I have a
934 mortgage for \$40,000. The net worth of (equity in) my house is thus \$60,000. My income is
935 \$50,000 a year, and I make interest-only mortgage payments of \$2,500 a year. I decide to
936 refinance the house because interest rates have declined, and I take out a larger mortgage. Now I
937 have a mortgage of \$50,000. Because of the decline in interest rates, my mortgage payments are
938 still \$2,500 a year. My income is still \$50,000 per year and my house is still worth \$100,000.
939 My financial risk is higher after I refinance, because, if my income does drop, I have a
940 significantly lower equity cushion when my net worth is \$50,000 (equity ratio of 50%) than it
941 was when my net worth was \$60,000 (equity ratio of 60%) before I refinanced. No mortgage
942 lender is going to be concerned with how much I originally paid for the house (book value) when
943 he assesses whether or not to refinance my house. He is concerned with the market value. It is

944 the market value of the house that determines how much financial risk he is taking on if he
945 decides to extend a new loan and the rate that he will charge. This is the same principle that
946 applies in the equity markets when investors set the cost of equity.

947 The implication of this example in the context of the fair return for the Ameren Utilities
948 is as follows. The costs of equity for the Ameren Utilities has been estimated using samples of
949 comparable proxy companies with a lower level of financial risk, as reflected in their market
950 value capital structures, than the financial risk reflected in the Ameren Utilities' ratemaking
951 capital structures. The failure to properly recognize the higher level of financial risk in the book
952 value capital structure of the Ameren Utilities relative to the financial risk of the proxy samples
953 of utilities, as recognized by equity investors, results in an underestimation of the Ameren
954 Utilities' cost of equity. Utilities are entitled to the opportunity to earn a return that meets the
955 fair return standard, namely one that provides the utility an opportunity to earn a return on
956 investment commensurate with that of comparable risk enterprises, to maintain its financial
957 integrity and to attract capital on reasonable terms. What must be fair is the overall return on
958 capital. The recognition in the allowed return on equity of the impact of financial risk
959 differences between the market value capital structures of the proxy companies and the
960 ratemaking capital structure is required to ensure that the Ameren Utilities are afforded the
961 opportunity to earn a return commensurate with that of comparable risk enterprises.

962 Ms. Freetly also contends that if the Commission adjusts the market-derived return on
963 equity to recognize the additional financial risk in the Ameren Utilities' book value capital
964 structures relative to the market value capital structures which underlie the cost of equity
965 estimates that would perpetuate further increases in earnings and further increases in the market
966 value of the stock. This is not correct.

967 As shown in the table below, if the utility is allowed to earn (and **does** earn) the return on
 968 equity that investors expect (e.g., 11.25%), the investor's market return will equal the cost of
 969 equity (e.g., 9.3%), and the market/book ratio should remain unchanged (e.g., 1.5X). Consistent
 970 with the assumptions of the constant growth DCF model, earnings, dividends, book and market
 971 values will all increase at the same rate, and the market/book ratio does not change. Changes in
 972 the market/book ratio would occur only if the cost of capital changes or the expected return on
 973 book equity changes.

974 **Table 15**

Effect of Realized Expected Book Return and Constant Market Return Requirement on Market/Book Ratio						
		Year 1	Year 2	Year 3	Year 4	Year 5
1	Book Value (1) _{t-1} + (6) _{t-1} - (7) _{t-1}	\$10.00	\$10.54	\$11.11	\$11.71	\$12.34
2	Market Value (2) _{t-1} x (+ (8) _{t-1})	\$15.00	\$15.81	\$16.66	\$17.56	\$18.51
3	Market/Book Ratio (2)/(1)	1.50	1.50	1.50	1.50	1.50
4	Payout Ratio	52%	52%	52%	52%	52%
5	Book Return on Equity	11.25%	11.25%	11.25%	11.25%	11.25%
6	Earnings per Share (1) x (5)	\$1.13	\$1.19	\$1.25	\$1.32	\$1.39
7	Dividends per Share (4) x (6)	\$0.59	\$0.62	\$0.65	\$0.68	\$0.72
8	Growth (5) x (1-(4))	5.4%	5.4%	5.4%	5.4%	5.4%
9	Dividend Yield (7)/(2)	3.9%	3.9%	3.9%	3.9%	3.9%
10	Market Return [((2) + (7) _{t-1})/(2) _{t-1}] -1	-	9.3%	9.3%	9.3%	9.3%

975 Ms. Freetly does recognize that differences in financial risk give rise to differences in
 976 cost of equity, although I take issue with the specific adjustments that she made (which I
 977 addressed earlier in my rebuttal). Effectively, her financial risk adjustments to utility samples'

978 cost of equity assumes that an equity investor quantifies financial risk differences identically to a
979 bond investor.

980 In contrast, my financial risk adjustments to the cost of equity for the electric and gas
981 utility samples consider the difference in financial risk from an equity investor's perspective.
982 Bond investors are only concerned with the probability of receiving all the coupon payments and
983 return of the capital investment they have made. Utility equity investors are concerned with the
984 volatility of market returns. Risk from an equity investor's perspective is measured by the
985 variance around the expected market returns. The financial risk component of that risk depends
986 on the companies' market value capital structures. My financial risk adjustments are required to
987 recognize the higher or lower return that **equity investors** require for bearing the higher or lower
988 financial risk inherent in the Ameren Utilities' proposed ratemaking capital structures.

989 Use of the Comparable Earnings Test

990 Ms. Freetly states that the use of the comparable earnings test is inappropriate for
991 determining the cost of equity.³³ Whether or not it is inappropriate will be addressed below.
992 However, I would note that, I did not use the comparable earnings test to determine the cost of
993 equity. As stated in my direct testimony (AmerenCILCO Exhibit 12.0G, page 78, lines 1483-
994 1489)³⁴ "...my recommendation is based on the results of the market-derived tests, the
995 discounted cash flow and equity risk premium tests." For purposes of this testimony, the results
996 of the comparable earnings test were used as an indicator of whether or not the market-based test
997 cost of equity results were reasonable. To that end, the results of the comparable earnings test
998 indicated that the proposed returns on equity for the Ameren Utilities, as indicated by the DCF

³³ Mr. Gorman and Mr. Thomas make similar arguments.

³⁴ This same comment is made in each of my direct testimonies.

999 and equity risk premium tests, are conservative when compared to the earnings level of relatively
1000 low risk unregulated companies.³⁵

1001 As pointed out by Ms. Freetly, the comparable earnings test is an accounting-based
1002 model, not a market-driven model. It does not estimate the investor's required return on equity,
1003 or cost of attracting equity capital. These items are measured in relation to market values. The
1004 comparable earnings test is intended to address the comparable returns standard as set out in
1005 *Bluefield Water Works & Improvement Co. v. Public Service Commission of West Virginia*, 262
1006 U.S. 679, 692 (1923). *Bluefield* stated that a public utility is entitled to:

1007 a return on the value of property which it employs for the convenience
1008 of the public equal to that generally being made at the same time and
1009 in the same general part of the country on investments in other
1010 business undertakings which are attended by corresponding risks and
1011 uncertainties....

1012 Implementation of this standard, as articulated in *Bluefield*, needs to recognize that the
1013 regulatory construct (original cost rate base) and the manner in which the return is determined
1014 and set are not independent. In a truly competitive environment, prices are set on the basis of
1015 market values, not book values. Under original cost regulation, where the equity used for
1016 regulatory purposes is based on the original cost, the comparable earnings test is a meaningful
1017 guideline for a fair return.

1018 I am not recommending the Commission allow returns on equity for the Ameren Utilities
1019 of 15-16%. However, the returns being earned by relatively low risk unregulated companies
1020 provide a relevant perspective on the reasonableness of the recommended return on equity.
1021 Competition for capital is across the spectrum of industries; utilities do not just compete with
1022 other utilities for capital. Adherence to the comparable returns standard does not mean that the

³⁵ For example, AmerenCILCO Exhibit 12.0G, page 78, lines 1476-1480. This same comment is made in each of my direct testimonies

1023 returns available only to other utilities should be considered. The comparable earnings test
1024 provides a broader frame of reference for assessing what constitutes a fair and reasonable return
1025 beyond the application of the DCF or equity risk premium tests to samples of utilities.

1026 **VIII. CONCLUSION**

1027 **Q. Does this conclude your rebuttal testimony?**

1028 A. Yes, it does.

**DCF COSTS OF EQUITY FOR SAMPLE
OF GAS UTILITIES USING MS. FREETLY'S PRICES
(THREE-STAGE MODEL)**

<u>Company</u>	Annualized Last Paid <u>Dividend</u> (1)	Average Daily Closing Prices <u>08/18/2009</u> (2)	Current <u>Dividend Yield</u>	Stage 1 Years 1-5 Zack's 3-5 Year <u>EPS Forecasts</u> (3)	Stage 2 Years 6-10 Avg. Zack's & GDP <u>Growth</u> ^{1/} (4)	Stage 3 Terminal Value GDP <u>Growth</u> ^{1/}	DCF Cost of <u>Equity</u> ^{2/} (5)
AGL Resources	1.72	34.18	5.03	5.3	5.2	5.1	10.6
Atmos Energy	1.32	27.63	4.78	5.0	5.1	5.1	10.3
New Jersey Resources	1.24	36.32	3.41	7.0	6.1	5.1	9.3
Nicor Inc.	1.86	36.39	5.11	4.2	4.6	5.1	10.4
Northwest Nat. Gas	1.58	42.56	3.71	6.8	5.9	5.1	9.6
Piedmont Natural Gas	1.08	24.42	4.42	6.6	5.9	5.1	10.3
South Jersey Inds.	1.19	34.86	3.42	9.5	7.3	5.1	9.9
Southwest Gas	0.95	24.99	3.81	6.0	5.6	5.1	9.4
WGL Holdings Inc.	1.47	33.01	4.46	6.7	5.9	5.1	10.3
Mean	1.38	32.71	4.24	6.3	5.7	5.1	10.0
Median	1.32	34.18	4.42	6.6	5.9	5.1	10.3

1/ Forecast nominal rate of GDP growth, 2011-20

2/ Internal Rate of Return: Zack's EPS forecast growth rate applies for first 5 years, average of Zack's and GDP for next 5 years, GDP growth thereafter.

Source: ICC Staff Exhibit 6.0, Schedules 6.03-G and 6.04-G; Blue Chip Financial Forecasts (June 2009).

DCF COSTS OF EQUITY FOR MS. FREETLY'S SAMPLE OF
16 U.S. ELECTRIC UTILITIES
(THREE-STAGE MODEL)

<u>Company</u>	Annualized Last Paid <u>Dividend</u> (1)	Closing Price <u>08/18/2009</u> (2)	Current <u>Dividend Yield</u> (3)	Stage 1 Zack's 3-5 Year <u>EPS Forecasts</u> (4)	Stage 2 Average of Stage 1 & 3 <u>Growth Rates</u> (5)	Stage 3 GDP <u>Growth</u> ^{1/} (6)	DCF Cost of <u>Equity</u> ^{2/} (6)
ALLETE	1.76	33.07	5.32	6.0	5.6	5.1	10.5
Ameren Corp.	1.54	26.21	5.88	4.4	4.8	5.1	10.9
Amer. Elec. Power	1.64	30.68	5.35	3.0	4.1	5.1	10.5
Avista Corp.	0.84	19.77	4.25	3.8	4.4	5.1	10.7
Cleco Corp.	0.90	24.24	3.71	8.7	6.9	5.1	12.1
CMS Energy Corp.	0.50	13.05	3.83	18.0	11.6	5.1	9.5
G't Plains Energy	0.83	17.71	4.70	12.5	8.8	5.1	9.6
IDACORP, Inc.	1.20	28.22	4.25	6.3	5.7	5.1	9.7
Northeast Utilities	0.95	23.55	4.04	9.5	7.3	5.1	10.2
PG&E Corp.	1.68	39.86	4.21	1.5	3.3	5.1	10.2
Pinnacle West Capital	2.10	32.33	6.50	5.0	5.1	5.1	12.8
Progress Energy	2.48	38.92	6.37	10.5	7.8	5.1	11.8
TECO Energy	0.80	12.98	6.16	4.5	4.8	5.1	14.1
Westar Energy	1.20	20.25	5.93	5.0	5.1	5.1	11.7
Wisconsin Energy	1.35	44.36	3.05	2.0	3.6	5.1	9.1
Xcel Energy Inc.	0.98	19.30	5.08	5.0	5.1	5.1	10.5
Mean	1.30	26.53	4.91	6.6	5.9	5.1	10.9
Median	1.20	25.23	4.89	5.0	5.1	5.1	10.5

1/ Forecast nominal rate of GDP growth, 2011-20

2/ Internal Rate of Return: Zack's EPS forecast growth rate applies for first 5 years, average of Zack's and GDP for next 5 years, GDP growth thereafter.

Source: ICC Staff Exhibit 6.0, Schedules 6.03-E and 6.04-E; Blue Chip Financial Forecasts (June 2009).

**DCF COSTS OF EQUITY FOR
SAMPLE OF GAS UTILITIES USING MS. FREETLY'S PRICES
(BASED ON ZACK'S EARNINGS GROWTH FORECASTS)
QUARTERLY COMPOUNDING**

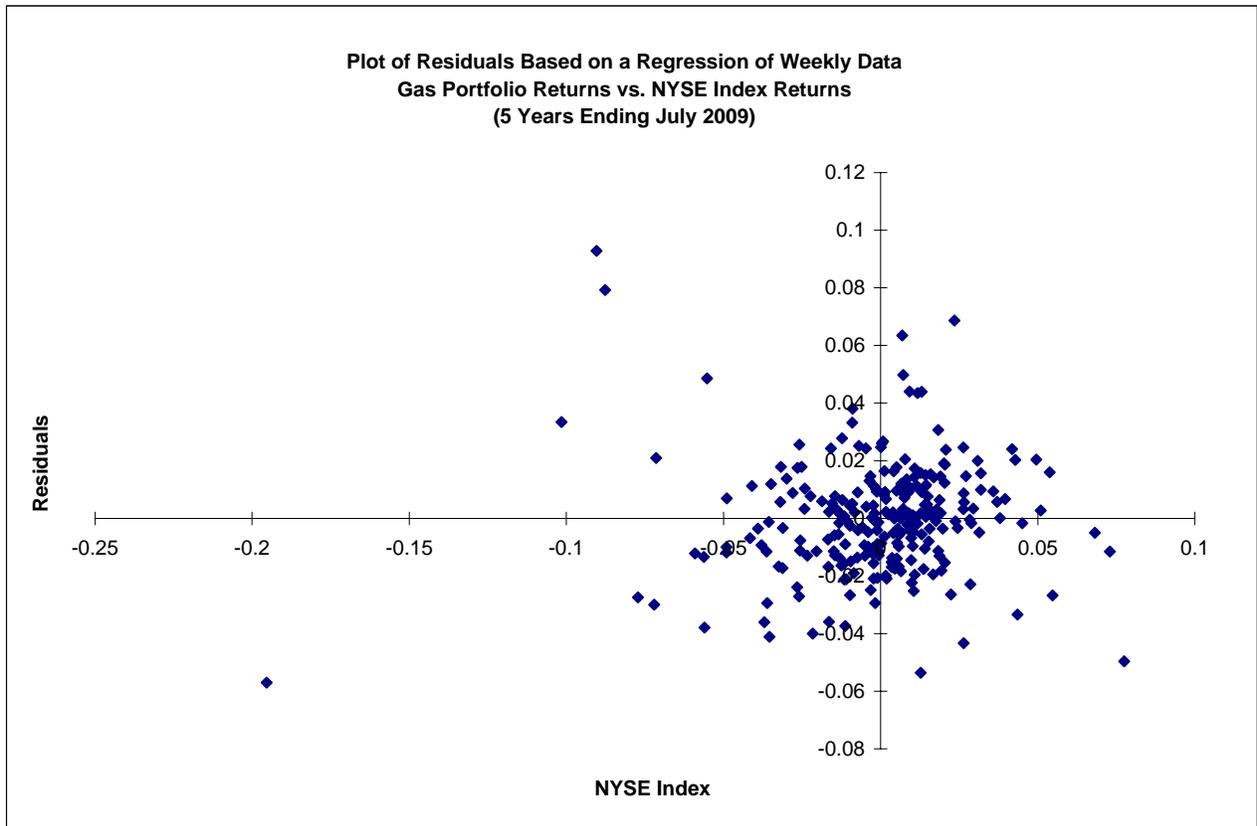
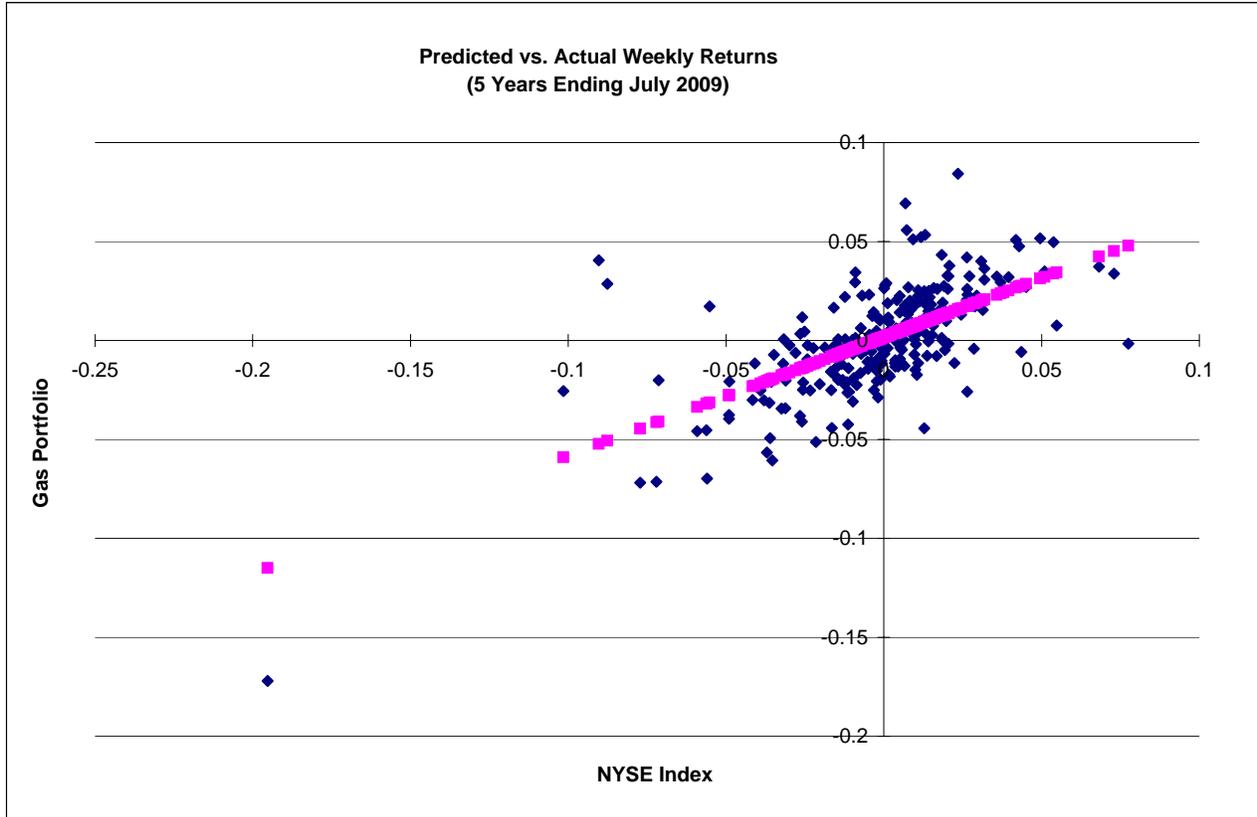
<u>Company</u>	Annualized Last Paid <u>Dividend</u> (1)	Average Daily Closing Prices <u>08/18/2009</u> (2)	Current <u>Dividend Yield</u>	Zack's 3-5 Year <u>Growth Rate Estimate</u> (4)	DCF Cost of <u>Equity</u> (5)
AGL Resources	1.72	34.18	5.03	5.3	10.7
Atmos Energy	1.32	27.63	4.78	5.0	10.2
New Jersey Resources	1.24	36.32	3.41	7.0	10.8
Nicor Inc.	1.86	36.39	5.11	4.2	9.7
Northwest Nat. Gas	1.58	42.56	3.71	6.8	10.9
Piedmont Natural Gas	1.08	24.42	4.42	6.6	11.4
South Jersey Inds.	1.19	34.86	3.42	9.5	13.4
Southwest Gas	0.95	24.99	3.81	6.0	10.1
WGL Holdings Inc.	1.47	33.01	4.46	6.7	11.5
Mean	1.38	32.71	4.24	6.3	11.0
Median	1.32	34.18	4.42	6.6	10.8

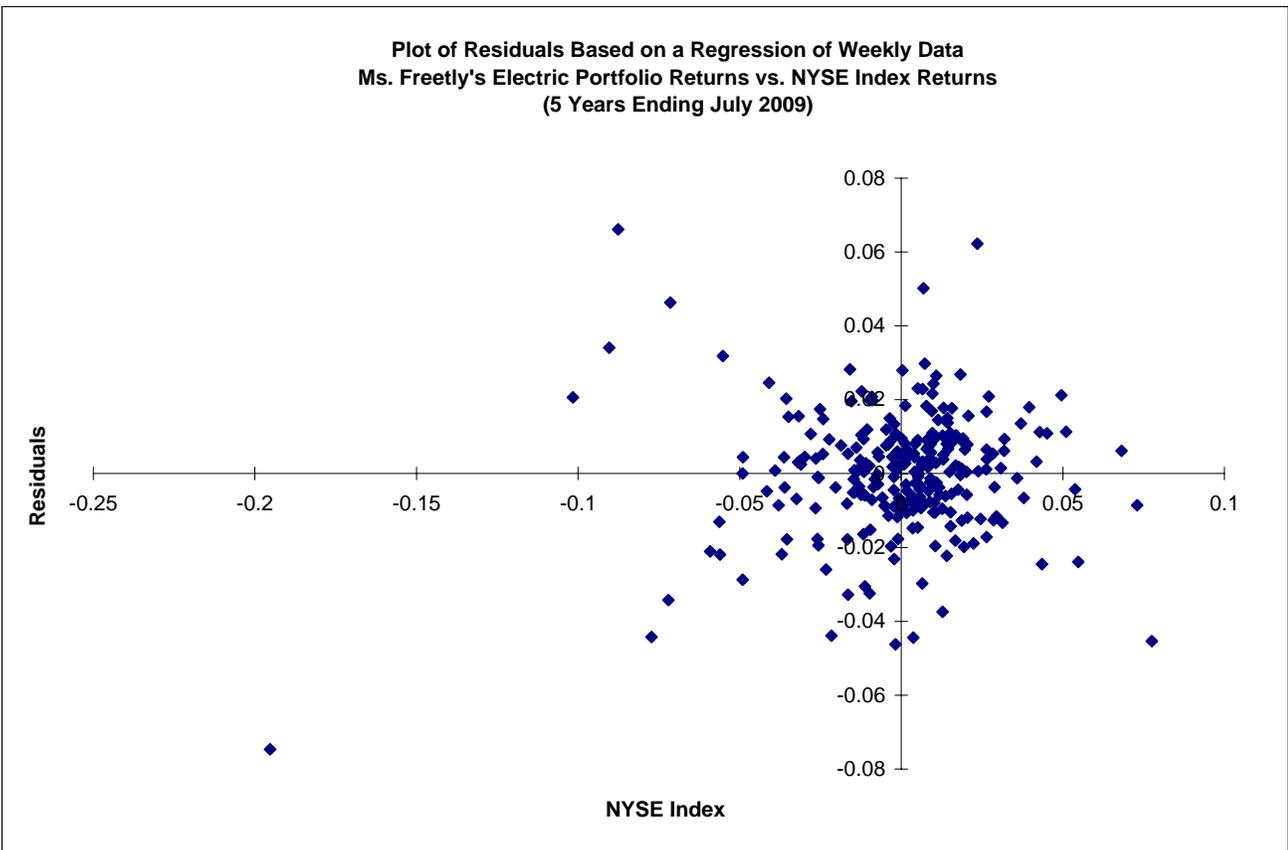
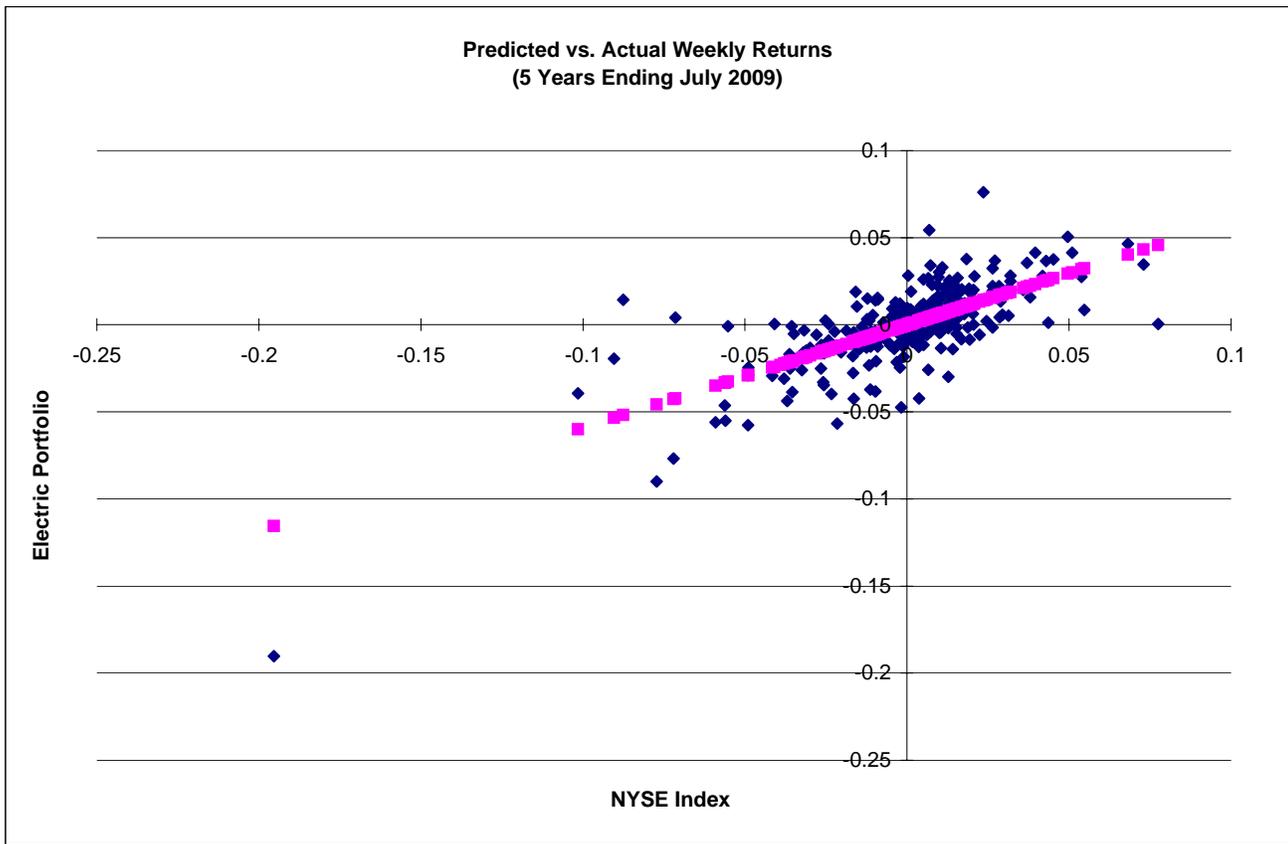
Source: ICC Staff Exhibit 6.0, Schedules 6.03-G and 6.04-G.

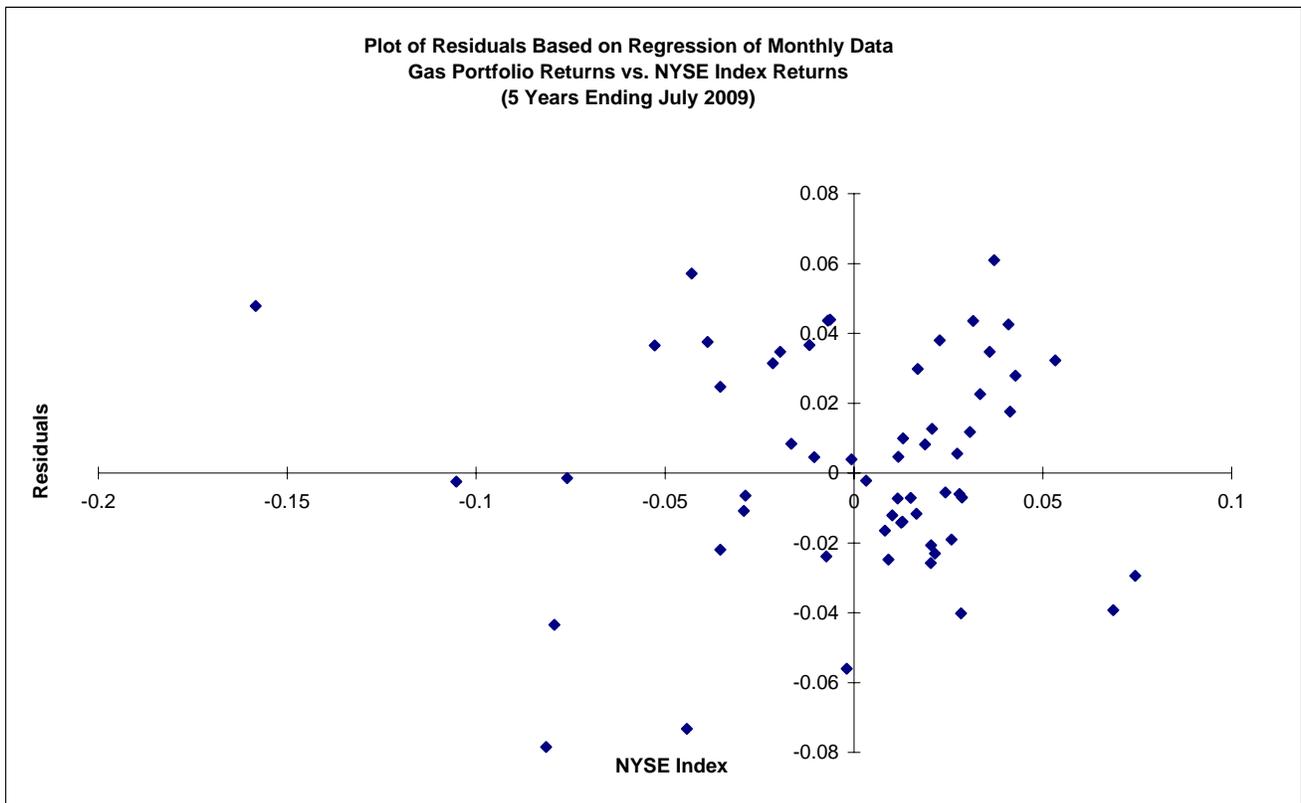
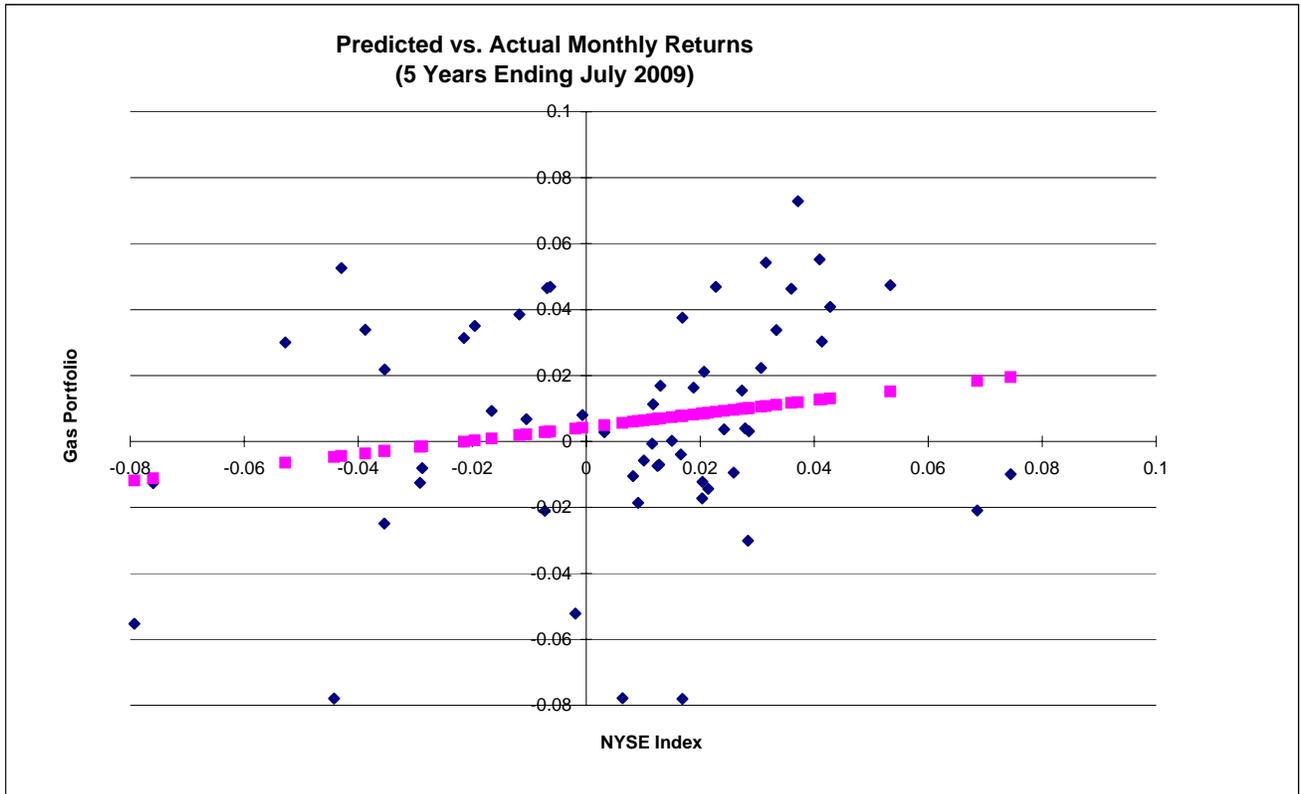
**DCF COSTS OF EQUITY FOR MS. FREETLY'S SAMPLE OF
16 U.S. ELECTRIC UTILITIES
(BASED ON ZACK'S EARNINGS GROWTH FORECASTS)
QUARTERLY COMPOUNDING**

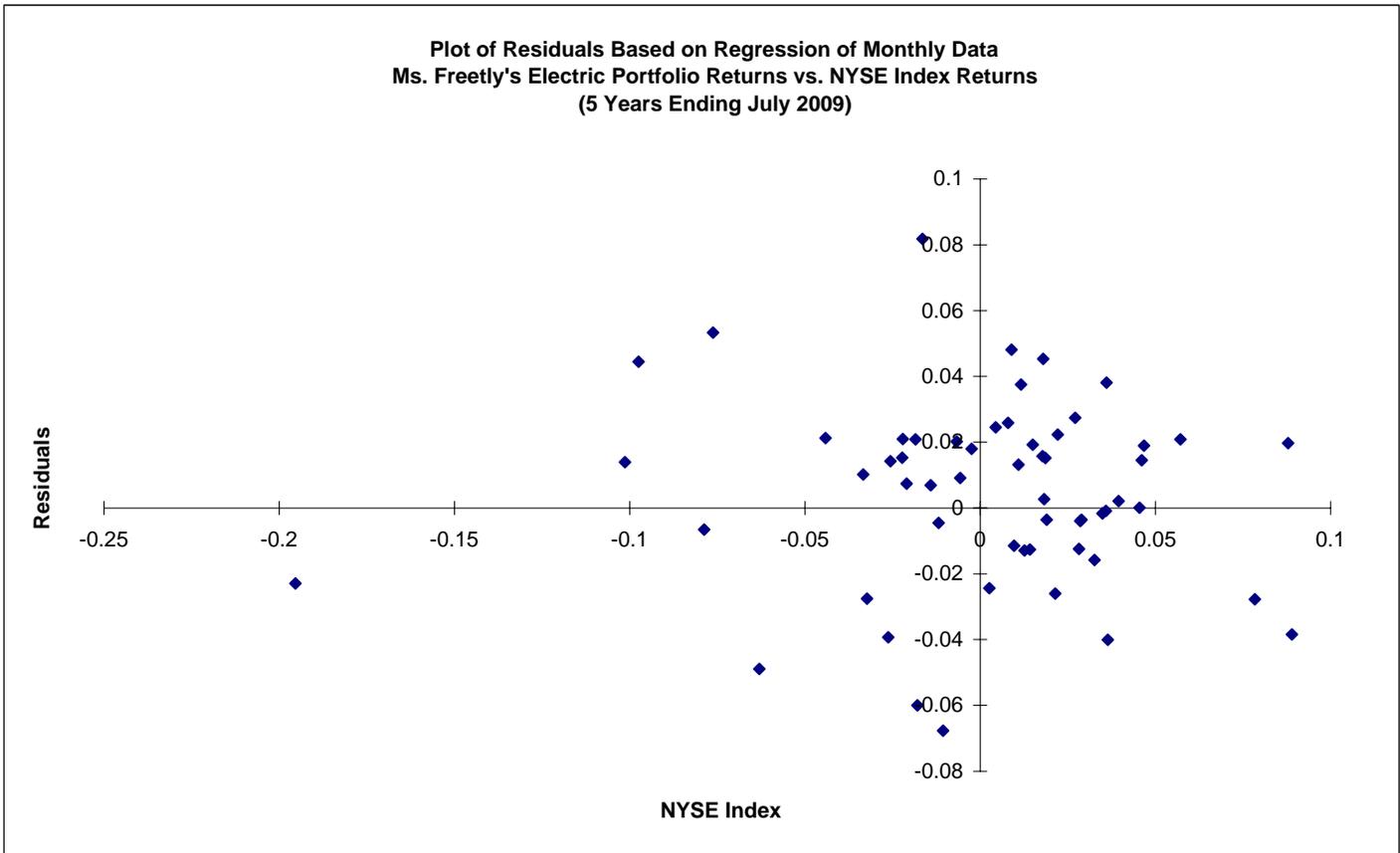
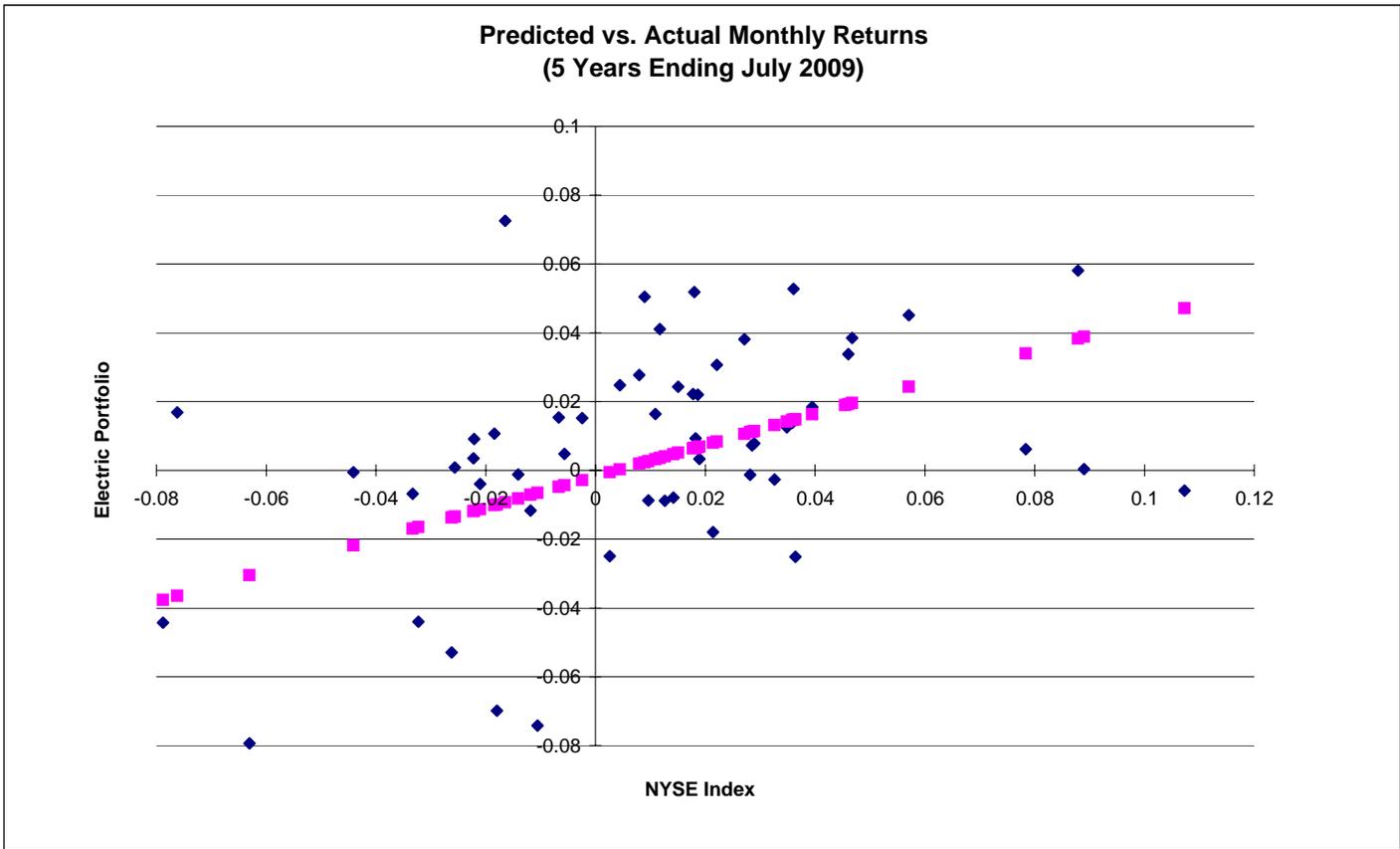
<u>Company</u>	Annualized Last Paid <u>Dividend</u> (1)	Closing Price <u>08/18/2009</u> (2)	Current <u>Dividend Yield</u> (3)	Zack's 3-5 Year <u>Growth Rate Esimate</u> (4)	DCF Cost of <u>Equity</u> (5)
ALLETE	1.76	33.07	5.32	4.0	9.7
Ameren Corp.	1.54	26.21	5.88	3.7	9.9
Amer. Elec. Power	1.64	30.68	5.35	3.8	9.5
Avista Corp.	0.84	19.77	4.25	8.7	13.3
Cleco Corp.	0.90	24.24	3.71	14.5	19.0
CMS Energy Corp.	0.50	13.05	3.83	6.3	10.4
G't Plains Energy	0.83	17.71	4.70	3.0	8.0
IDACORP, Inc.	1.20	28.22	4.25	5.0	9.6
Northeast Utilities	0.95	23.55	4.04	7.7	12.1
PG&E Corp.	1.68	39.86	4.21	7.3	11.8
Pinnacle West Capital	2.10	32.33	6.50	6.5	13.7
Progress Energy	2.48	38.92	6.37	4.6	11.5
TECO Energy	0.80	12.98	6.16	10.3	17.5
Westar Energy	1.20	20.25	5.93	5.7	12.1
Wisconsin Energy	1.35	44.36	3.05	8.4	11.8
Xcel Energy Inc.	0.98	19.30	5.08	5.2	10.6
Mean	1.30	26.53	4.91	6.5	11.9
Median	1.20	25.23	4.89	6.0	11.6

Source: ICC Staff Exhibit 6.0, Schedules 6.03-E and 6.04-E.









10-YEAR ROLLING AVERAGE FOR U.S. MARKET RETURNS

US Stock Returns		US Stock Returns	
1926-1935	10.80%	1963-1972	10.55%
1927-1936	13.04%	1964-1973	6.80%
1928-1937	5.78%	1965-1974	2.51%
1929-1938	4.54%	1966-1975	4.98%
1930-1939	5.34%	1967-1976	8.37%
1931-1940	6.85%	1968-1977	5.26%
1932-1941	10.02%	1969-1978	4.81%
1933-1942	12.87%	1970-1979	7.50%
1934-1943	10.07%	1971-1980	10.34%
1935-1944	12.19%	1972-1981	8.42%
1936-1945	11.07%	1973-1982	8.67%
1937-1946	6.87%	1974-1983	12.38%
1938-1947	10.94%	1975-1984	15.66%
1939-1948	8.38%	1976-1985	15.15%
1940-1949	10.30%	1977-1986	14.61%
1941-1950	14.45%	1978-1987	15.86%
1942-1951	18.01%	1979-1988	16.88%
1943-1952	17.81%	1980-1989	18.19%
1944-1953	15.12%	1981-1990	14.63%
1945-1954	18.41%	1982-1991	18.17%
1946-1955	17.92%	1983-1992	16.80%
1947-1956	19.38%	1984-1993	15.55%
1948-1957	17.74%	1985-1994	15.05%
1949-1958	21.52%	1986-1995	15.58%
1950-1959	20.84%	1987-1996	16.04%
1951-1960	17.71%	1988-1997	18.85%
1952-1961	18.00%	1989-1998	20.03%
1953-1962	15.29%	1990-1999	18.98%
1954-1963	17.67%	1991-2000	18.39%
1955-1964	14.06%	1992-2001	14.15%
1956-1965	12.15%	1993-2002	11.17%
1957-1966	10.48%	1994-2003	13.04%
1958-1967	13.96%	1995-2004	14.00%
1959-1968	10.73%	1996-2005	10.74%
1960-1969	8.68%	1997-2006	10.02%
1961-1970	9.04%	1998-2007	7.23%
1962-1971	7.78%	1999-2008	0.67%

Source: Ibbotson Associates, Stocks, Bonds, Bills and Inflation: 2009 Yearbook,
www.federalreserve.gov, www.standardandpoors.com

10-YEAR ROLLING AVERAGE RETURNS FOR U.S. UTILITIES

	S&P/Moody's Gas Distributors Returns	S&P/Moody's Electric Returns		S&P/Moody's Gas Distributors Returns	S&P/Moody's Electric Returns
1947-1956	12.4%	10.4%	1973-1982	12.0%	9.9%
1948-1957	12.6%	12.6%	1974-1983	17.1%	13.1%
1949-1958	15.7%	16.3%	1975-1984	18.7%	18.1%
1950-1959	12.6%	14.3%	1976-1985	18.2%	15.6%
1951-1960	14.6%	16.0%	1977-1986	15.9%	16.0%
1952-1961	15.9%	17.2%	1978-1987	14.0%	14.4%
1953-1962	14.3%	15.4%	1979-1988	16.4%	16.5%
1954-1963	15.0%	15.5%	1980-1989	17.1%	19.8%
1955-1964	13.5%	14.7%	1981-1990	13.9%	19.3%
1956-1965	12.4%	13.7%	1982-1991	17.0%	20.3%
1957-1966	9.9%	13.0%	1983-1992	19.0%	17.3%
1958-1967	10.8%	11.7%	1984-1993	17.2%	17.3%
1959-1968	8.6%	8.7%	1985-1994	14.2%	13.5%
1960-1969	6.9%	6.9%	1986-1995	15.3%	14.0%
1961-1970	7.9%	6.0%	1987-1996	13.9%	11.2%
1962-1971	4.7%	3.3%	1988-1997	16.8%	14.6%
1963-1972	6.5%	3.6%	1989-1998	14.5%	15.2%
1964-1973	3.8%	0.7%	1990-1999	10.0%	10.2%
1965-1974	2.7%	-3.4%	1991-2000	12.7%	15.8%
1966-1975	5.1%	1.4%	1992-2001	11.0%	12.3%
1967-1976	11.4%	4.1%	1993-2002	9.8%	10.6%
1968-1977	11.4%	5.3%	1994-2003	10.1%	11.2%
1969-1978	9.4%	4.1%	1995-2004	12.8%	14.1%
1970-1979	14.6%	5.5%	1996-2005	9.6%	11.9%
1971-1980	14.7%	4.9%	1997-2006	10.7%	13.7%
1972-1981	13.6%	6.7%	1998-2007	8.8%	12.4%
			1999-2008	9.6%	7.4%

Source: Ibbotson Associates, Stocks, Bonds, Bills and Inflation: 2009 Yearbook;
www.standardandpoors.com, Mergent Corporate News Reports,
www.federalreserve.gov

**Average Annual Dividend Yield of Ms.
McShane's Electric Sample 1991-2009**

1991	6.55
1992	6.02
1993	5.51
1994	6.70
1995	6.33
1996	6.18
1997	6.12
1998	5.09
1999	5.45
2000	5.40
2001	4.98
2002	5.72
2003	5.44
2004	4.36
2005	3.88
2006	3.86
2007	3.52
2008	4.32
2009	5.54
Average	5.31

Source: S&P Research Insight

**Mr. Gorman's Sustainable Constant Growth DCF Model
Corrected For Addition of External Growth
Gas Utility**

<u>Line</u>	<u>Company</u>	<u>13-Week AVG Stock Price</u>	<u>Mr. Gorman's Sustainable Growth</u>	<u>Ms. McShane's External Growth, "sv"</u>	<u>Corrected Sustainable Growth</u>	<u>Annual Dividend</u>	<u>Adjusted Yield</u>	<u>Quarterly Sustainable Growth DCF</u>
1	AGL Resources	\$31.99	6.03%	1.02%	7.05%	\$1.72	5.76%	12.92%
2	Atmos Energy	\$25.79	4.09%	0.90%	4.99%	\$1.32	5.37%	10.47%
3	New Jersey Resources	\$36.62	5.45%	0.43%	5.88%	\$1.24	3.59%	9.51%
4	Nicor Inc.	\$34.75	4.12%	0.08%	4.20%	\$1.86	5.58%	9.89%
5	Northwest Nat. Gas	\$43.74	4.75%	0.57%	5.32%	\$1.58	3.80%	9.18%
6	Piedmont Natural Gas	\$24.00	5.12%	-0.04%	5.08%	\$1.08	4.73%	9.89%
7	South Jersey Inds.	\$34.98	7.03%	0.98%	8.01%	\$1.19	3.68%	11.74%
8	Southwest Gas	\$22.73	4.29%	0.50%	4.79%	\$0.95	4.39%	9.24%
9	WGL Holdings Inc.	\$31.96	4.34%	0.01%	4.35%	\$1.48	4.83%	9.27%
10	Average	\$31.84	5.02%	0.49%	5.52%	\$1.38	4.64%	10.23%
11	Median	\$31.99	4.75%	0.50%	5.08%	\$1.32	4.73%	9.89%

Sources: IIEC Exhibit 2.11 Page 2 of 2; McShane Exhibit 12 G.5 Updated

**Mr. Gorman's Sustainable Constant Growth DCF Model
Corrected For Addition of External Growth
Electric Utility**

<u>Line</u>	<u>Company</u>	<u>13-Week AVG Stock Price</u>	<u>Mr. Gorman's Sustainable Growth</u>	<u>Ms. McShane's External Growth, "sv"</u>	<u>Corrected Sustainable Growth</u>	<u>Annual Dividend</u>	<u>Adjusted Yield</u>	<u>Quarterly Sustainable Growth DCF</u>
1	ALLETE	\$29.77	2.86%	1.29%	4.15%	\$1.76	6.16%	10.45%
2	Alliant Energy	\$25.50	4.11%	0.26%	4.37%	\$1.50	6.14%	10.65%
3	Ameren Corp.	\$24.75	3.88%	-0.08%	3.80%	\$1.54	6.46%	10.41%
4	Amer. Elec. Power	\$28.98	4.81%	0.83%	5.65%	\$1.64	5.98%	11.75%
5	Avista Corp.	\$17.75	2.59%	0.17%	2.75%	\$0.84	4.86%	7.70%
6	CenterPoint Energy	\$11.21	6.44%	1.33%	7.77%	\$0.76	7.30%	15.27%
7	Cleco Corp.	\$22.60	3.96%	0.57%	4.53%	\$0.90	4.16%	8.76%
8	CMS Energy Corp.	\$12.26	4.83%	0.10%	4.93%	\$0.50	4.28%	9.28%
9	DPL Inc.	\$23.26	9.71%	0.81%	10.53%	\$1.14	5.42%	16.04%
10	DTE Energy	\$32.39	3.66%	0.32%	3.98%	\$2.12	6.81%	10.95%
11	Edison Int'l	\$31.29	7.14%	0.00%	7.14%	\$1.24	4.25%	11.45%
12	Entergy Corp.	\$76.65	7.24%	-0.07%	7.17%	\$3.00	4.19%	11.43%
13	Exelon Corp.	\$49.87	10.97%	-0.43%	10.54%	\$2.10	4.66%	15.27%
14	FirstEnergy Corp.	\$40.31	7.07%	0.00%	7.07%	\$2.20	5.84%	13.04%
15	G't Plains Energy	\$15.84	2.25%	-1.62%	0.63%	\$0.83	5.29%	6.02%
16	IDACORP, Inc.	\$25.93	3.75%	0.08%	3.83%	\$1.20	4.81%	8.72%
17	Integrays Energy (WPS)	\$30.74	1.85%	0.09%	1.94%	\$2.72	9.02%	11.26%
18	Northeast Utilities	\$22.25	4.40%	1.42%	5.82%	\$0.95	4.52%	10.41%
19	Otter Tail Corp.	\$22.18	2.67%	0.62%	3.29%	\$1.19	5.55%	8.95%
20	Pepco Holdings	\$13.55	3.35%	-0.09%	3.26%	\$1.08	8.23%	11.73%
21	PG&E Corp.	\$38.36	5.66%	0.55%	6.21%	\$1.68	4.65%	10.93%
22	Pinnacle West Capital	\$30.18	2.88%	0.18%	3.06%	\$2.10	7.17%	10.42%
23	Portland General	\$18.97	3.33%	0.20%	3.53%	\$1.02	5.57%	9.22%
24	Progress Energy	\$37.58	2.83%	0.24%	3.06%	\$2.48	6.80%	10.03%
25	Public Serv. Enterprise	\$32.21	8.45%	-0.30%	8.16%	\$1.33	4.47%	12.69%
26	TECO Energy	\$12.18	4.26%	0.15%	4.40%	\$0.80	6.86%	11.43%
27	Westar Energy	\$18.92	2.76%	0.01%	2.77%	\$1.20	6.52%	9.44%
28	Wisconsin Energy	\$41.57	6.23%	0.01%	6.23%	\$1.52	3.88%	10.17%
29	Xcel Energy Inc.	\$18.60	4.74%	0.06%	4.80%	\$0.98	5.52%	10.43%
30	Average	\$27.78	4.78%	0.23%	5.01%	\$1.46	5.70%	10.84%
31	Median	\$25.50	4.11%	0.15%	4.40%	\$1.24	5.55%	10.45%

Sources: IIEC Exhibit 2.11 Page 1 of 2; McShane Exhibit 12 E.5 Updated

Ms. McShane's Gas Cost of Equity Update Summary

	Market Value Common Equity Ratio	Sample Cost of Equity	Updated		
			AmerenCIPS	AmerenCILCO	AmerenIP
Book Value Common Equity Ratio			48.7%	43.6%	44.1%
DCF					
Constant-I/B/E/S	58%	10.14%	10.90%	11.50%	11.50%
Constant-Sustainable Growth	58%	9.90%	10.70%	11.20%	11.20%
Three-Stage	58%	9.90%	10.70%	11.20%	11.20%
Equity Risk Premium					
CAPM Forward	60%	9.70%	10.60%	11.10%	11.10%
CAPM Historic	60%	9.79%	10.70%	11.30%	11.20%
Historic-Utility vs. risk-free rate	na	11.00%	11.00%	11.00%	11.00%
Historic-Utility vs. Baa-rated public utility bonds	na	11.30%	11.30%	11.30%	11.30%
DCF-based Risk Premium vs. Baa-rated public utility bonds	60%	9.75%	10.60%	11.20%	11.10%
Cost Of Equity			10.80%	11.20%	11.20%

Ms. McShane's Electric Cost of Equity Update Summary

	Market Value Common Equity Ratio	Sample Cost of Equity	Updated		
			AmerenCIPS	AmerenCILCO	AmerenIP
Book Value Common Equity Ratio			48.7%	43.6%	44.1%
DCF					
Constant-I/B/E/S	48%	12.30%	12.20%	12.90%	12.80%
Constant-Sustainable Growth	48%	10.40%	10.30%	10.80%	10.80%
Three-Stage	48%	11.20%	11.10%	11.70%	11.60%
Equity Risk Premium					
CAPM Forward	55%	10.30%	10.80%	11.40%	11.30%
CAPM Historic	55%	10.40%	10.90%	11.50%	11.40%
Historic-Utility vs. risk-free rate	na	11.00%	11.00%	11.00%	11.00%
Historic-Utility vs. Baa-rated public utility bonds	na	11.50%	11.50%	11.50%	11.50%
DCF-based Risk Premium vs. Baa-rated public utility bonds	53%	11.70%	12.20%	12.80%	12.80%
Cost Of Equity			11.30%	11.70%	11.70%

INDIVIDUAL COMPANY RISK DATA FOR
9 SELECTED U.S. LOCAL NATURAL GAS DISTRIBUTION COMPANIES

Company	Value Line				Forecast			S & P			Moody's Debt Rating	Average Common Equity Ratio (Total Capital) 2008Q1-2008Q4 (%)	Market/Book Ratio 2009 ^{2/}
	Safety Rank	Earnings Predictability	Financial Strength	Beta	Forecast Return On Average Common Equity 2012-2014 (%)	Forecast Common Equity Ratio 2012-2014 (%)	Dividend Payout Ratio 2012-2014 (%)	Debt Rating	Business Risk Profile	Financial Profile			
AGL Resources	2	90	B++	0.75	14.4	57.0	57.0	A-	Excellent	Significant	Baa1	43.1	1.59
Atmos Energy	2	85	B+	0.65	9.5	51.0	56.0	BBB+	Excellent	Significant	Baa2	47.4	1.23
New Jersey Resources ^{1/}	1	45	A	0.65	10.5	68.0	50.0	A	Excellent	Intermediate	Aa3	51.8	2.12
Nicor Inc.	3	80	A	0.70	12.4	74.0	57.2	AA	Excellent	Intermediate	na	56.8	1.70
Northwest Nat. Gas	1	90	A	0.60	11.6	53.0	58.0	AA-	Excellent	Intermediate	A3	49.0	1.79
Piedmont Natural Gas	2	90	B++	0.65	12.9	53.0	64.7	A	Excellent	Intermediate	A3	46.6	2.01
South Jersey Inds.	2	80	B++	0.65	14.1	62.0	48.4	BBB+	Excellent	Significant	A2	51.3	2.00
Southwest Gas	3	70	B	0.75	8.4	51.0	50.0	BBB	Excellent	Aggressive	Baa3	45.7	1.06
WGL Holdings Inc.	1	80	A	0.65	10.5	64.5	60.4	AA-	Excellent	Intermediate	A2	54.9	1.59
MEAN	2	79	B++	0.67	11.6	59.3	55.7	A	Excellent	Intermediate/Significant	A3	49.6	1.68
MEDIAN	2	80	B++	0.65	11.6	57.0	57.0	A	Excellent	Intermediate	A3	49.0	1.70

1/ For subsidiary, New Jersey Natural Gas

2/ Average daily closing prices August 17 to September 16, 2009-divided by 2008 year end book value per share.

Source: Value Line (Issue 3, September 11, 2009)

Standard & Poor's Issuer Ranking: U.S. Natural Gas Distributors and Integrated Gas Companies, Strongest to Weakest (September 2, 2009);

www.moodys.com, company 10-Qs; S&P Research Insight.

INDIVIDUAL COMPANY RISK DATA FOR
29 SELECTED U.S. ELECTRIC COMPANIES

Company	Value Line				Forecast			S & P			Moody's Debt Rating	Common Equity Ratio (Total Capital) 2008 (%)	Average Market/ Book Ratio 2009 ^{1/}
	Safety Rank	Earnings Predictability	Financial Strength	Beta	Forecast Return	Forecast	Dividend Payout	Debt Rating	Business Risk Profile	Financial Profile			
					On Average Common Equity 2012-2014 (%)	Common Equity Ratio 2012-2014 (%)	Ratio 2012-2014 (%)						
ALLETE INC	2	65	A	0.70	9.6	51.5	69.8	BBB+	Strong	Significant	Baa1	57.8	1.32
ALLIANT ENERGY CORP	2	70	A	0.70	10.5	59.5	60.0	BBB+	Excellent	Significant	Baa1	56.0	1.04
AMEREN CORP	3	85	B++	0.80	8.3	53.0	52.3	BBB-	Satisfactory	Significant	Baa3	45.6	0.80
AMERICAN ELECTRIC POWER	3	90	B++	0.70	10.8	47.5	54.3	BBB	Excellent	Aggressive	Baa2	37.3	1.18
AVISTA CORP	3	50	B+	0.70	8.3	50.0	68.6	BBB-	Excellent	Aggressive	Baa3	45.5	1.08
CENTERPOINT ENERGY INC	3	50	B	0.80	17.2	29.5	61.3	BBB	Excellent	Aggressive	Ba1	16.0	2.12
CLECO CORP	3	70	B+	0.65	11.2	54.0	64.0	BBB	Excellent	Aggressive	Baa3	47.5	1.40
CMS ENERGY CORP	3	10	B	0.80	10.6	31.5	53.3	BBB-	Excellent	Aggressive	Ba1	26.0	1.22
DPL INC	3	55	B++	0.60	20.0	50.5	49.1	A-	Excellent	Intermediate	Baa1	38.3	2.98
DTE ENERGY CO	3	60	B+	0.75	9.9	44.0	62.5	BBB	Strong	Significant	Baa2	40.4	0.95
EDISON INTERNATIONAL	3	40	B++	0.80	11.4	45.5	35.3	BBB-	Strong	Aggressive	Baa2	40.2	1.14
ENTERGY CORP	2	85	A	0.70	13.6	38.5	47.5	BBB	Strong	Significant	Baa3	38.8	1.89
EXELON CORP	1	95	A+	0.85	20.6	57.0	43.6	BBB	Strong	Significant	Baa1	45.5	2.96
FIRSTENERGY CORP	2	70	A	0.80	14.8	48.5	50.5	BBB	Strong	Significant	Baa3	37.2	1.67
GREAT PLAINS ENERGY INC	3	75	B+	0.75	6.8	47.5	66.7	BBB	Excellent	Aggressive	Baa3	44.0	0.83
IDACORP INC	3	50	B+	0.70	7.8	51.0	50.9	BBB	Excellent	Aggressive	Baa2	47.8	1.00
INTEGRYS ENERGY GROUP INC	3	55	B+	0.95	8.4	52.5	77.7	BBB+	Excellent	Aggressive	Baa1	45.6	0.85
NORTHEAST UTILITIES	3	50	B+	0.70	9.2	44.0	51.1	BBB	Excellent	Aggressive	Baa2	35.1	1.24
OTTER TAIL CORP	2	70	A	0.90	8.6	68.0	68.4	BBB-	Satisfactory	Significant	A3	57.8	1.25
PEPCO HOLDINGS INC	3	75	B	0.80	8.5	48.5	60.0	BBB	Strong	Significant	Baa3	41.4	0.75
PG&E CORP	2	5	B++	0.55	12.1	54.5	51.8	BBB+	Excellent	Significant	Baa1	43.8	1.55
PINNACLE WEST CAPITAL CORP	3	65	B+	0.75	9.0	50.0	67.7	BBB-	Strong	Significant	Baa3	47.0	0.96
PORTLAND GENERAL ELECTRIC (2	NMF	B++	0.70	8.5	50.5	60.0	BBB+	Strong	Significant	Baa2	47.3	0.91
PROGRESS ENERGY INC	2	80	B++	0.65	9.9	47.5	71.1	BBB+	Excellent	Aggressive	Baa2	42.0	1.19
PUBLIC SERVICE ENTRP GRP	3	80	B++	0.80	16.1	57.5	45.3	BBB	Excellent	Aggressive	Baa2	46.0	2.06
TECO ENERGY INC	3	30	B	0.85	12.2	41.5	64.3	BBB	Excellent	Aggressive	Baa3	37.8	1.42
WESTAR ENERGY INC	2	40	B++	0.75	8.0	54.0	65.1	BBB-	Excellent	Aggressive	Baa3	45.6	1.02
WISCONSIN ENERGY CORP	2	85	B++	0.65	12.3	45.0	47.8	BBB+	Excellent	Aggressive	A3	41.2	1.59
XCEL ENERGY INC	2	50	B++	0.65	10.8	48.5	55.0	BBB+	Excellent	Significant	Baa1	44.0	1.28
MEAN	3	61	B++	0.74	11.2	49.0	57.8	BBB	Excellent	Aggressive	Baa2	42.7	1.37
MEDIAN	3	65	B++	0.75	10.5	50.0	60.0	BBB	Excellent	Aggressive	Baa2	44.0	1.22

1/ Average daily closing prices August 17 to September 16, 2009-divided by 2008 year end book value per share.

Source: Value Line (Issue 1, August 28, 2009; Issue 5, June 26, 2008; Issue 11, August 7, 2009); Value Line Index on September 11, 2009;
Standard & Poor's Issuer Ranking: U.S. Regulated Electric Utilities, Strongest to Weakest (September 1, 2009);
Standard & Poor's Issuer Ranking: U.S. Energy Merchants/Power Developers/Trading and Marketing Companies, Strongest to Weakest (June 22, 2009);
www.moodys.com, company 10-Qs; S&P Research Insight.

**DCF COSTS OF EQUITY FOR 9 SELECTED
U.S. LOCAL NATURAL GAS DISTRIBUTION COMPANIES
(BASED ON IBES' EARNINGS GROWTH FORECASTS)
QUARTERLY COMPOUNDING**

<u>Company</u>	<u>Annualized Last Paid Dividend</u> (1)	<u>Average Daily Closing Prices Aug. 17-Sep. 16, 2009</u> (2)	<u>Current Dividend Yield</u>	<u>Average I/B/E/S Long-Term EPS Forecasts (August 2009)</u> (4)	<u>DCF Cost of Equity</u> (5)
AGL Resources	1.72	34.17	5.03	4.5	9.9
Atmos Energy	1.32	27.73	4.76	5.0	10.2
New Jersey Resources	1.24	36.68	3.38	6.5	10.2
Nicor Inc.	1.86	36.49	5.10	4.3	9.9
Northwest Nat. Gas	1.58	42.51	3.72	5.2	9.2
Piedmont Natural Gas	1.08	24.34	4.44	6.2	11.1
South Jersey Inds.	1.19	34.71	3.43	9.6	13.6
Southwest Gas	0.95	24.69	3.86	5.7	9.8
WGL Holdings Inc.	1.47	33.41	4.41	4.5	9.2
Mean	1.38	32.75	4.24	5.7	10.4
Median	1.32	34.17	4.41	5.2	9.9

Source: Standard & Poor's Research Insight, www.yahoo.com

**DCF COSTS OF EQUITY FOR SAMPLE OF
29 U.S. ELECTRIC UTILITIES
(BASED ON I/B/E/S EARNINGS GROWTH FORECASTS)
QUARTERLY COMPOUNDING**

<u>Company</u>	Annualized Last Paid <u>Dividend</u> (1)	Average Daily Closing Prices <u>Aug. 17 - Sep. 16, 2009</u> (2)	Current <u>Dividend Yield</u> (3)	Average I/B/E/S Long-Term EPS Forecasts <u>(August 2009)</u> (4)	DCF Cost of <u>Equity</u> (5)
ALLETE	1.76	33.53	5.25	6.0	11.8
Alliant Energy	1.50	26.53	5.65	4.4	10.5
Ameren Corp.	1.54	26.57	5.80	3.0	9.1
Amer. Elec. Power	1.64	31.16	5.26	3.8	9.4
Avista Corp.	0.84	19.75	4.25	8.7	13.3
CenterPoint Energy	0.76	12.49	6.08	18.0	25.6
Cleco Corp.	0.90	24.55	3.67	12.5	16.9
CMS Energy Corp.	0.50	13.24	3.78	6.3	10.5
DPL Inc.	1.14	25.08	4.55	9.5	14.7
DTE Energy	2.12	35.03	6.05	1.5	7.8
Edison Int'l	1.24	33.36	3.72	5.0	9.0
Energy Corp.	3.00	79.53	3.77	10.5	15.0
Exelon	2.10	49.67	4.23	4.5	9.1
FirstEnergy Corp.	2.20	45.49	4.84	5.0	10.3
G't Plains Energy	0.83	17.78	4.66	2.0	6.9
IDACORP, Inc.	1.20	28.59	4.20	5.0	9.6
Integrus Energy	2.72	34.62	7.86	26.2	36.8
Northeast Utilities	0.95	23.94	3.96	8.5	12.9
Otter Tail Corp.	1.19	23.99	4.97	7.8	13.5
Pepco Holdings	1.08	14.28	7.56	5.5	13.9
PG&E Corp.	1.68	40.32	4.17	7.0	11.6
Pinnacle West Capital	2.10	32.79	6.40	5.5	12.6
Portland General	1.02	19.72	5.17	7.4	13.0
Progress Energy	2.48	39.29	6.31	4.4	11.3
Public Service Enterprise Group	1.33	31.63	4.21	5.3	9.9
TECO Energy	0.80	13.40	5.97	8.2	15.1
Westar Energy	1.20	20.47	5.86	3.3	9.5
Wisconsin Energy	1.35	45.25	2.99	8.7	12.1
Xcel Energy Inc.	0.98	19.68	4.98	6.7	12.1
Mean	1.45	29.71	5.04	7.3	12.9
Median	1.24	26.57	4.97	6.0	11.8

Source: Standard & Poor's Research Insight, www.yahoo.com

DCF COSTS OF EQUITY FOR SELECTED
LOCAL NATURAL GAS DISTRIBUTION COMPANIES
(SUSTAINABLE GROWTH AND QUARTERLY COMPOUNDING)

<u>Company</u>	<u>Annualized Last Dividend Paid</u>	<u>Average Daily Closing Prices Aug. 17-Sep. 16, 2009</u>	<u>Expected Dividend Yield ^{1/}</u>	<u>Forecast Return on Common Equity</u>	<u>Forecast Earnings Retention Rate</u>	<u>BR Growth ^{2/} (September 2009)</u>	<u>SV Growth ^{3/} (September 2009)</u>	<u>Sustainable Growth ^{4/} (September 2009)</u>	<u>DCF Cost of Equity ^{5/}</u>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
AGL RESOURCES INC	1.72	34.17	5.4	14.4	43.0	6.2	1.02	7.2	12.8
ATMOS ENERGY CORP	1.32	27.73	5.0	9.5	44.0	4.2	0.90	5.1	10.3
NEW JERSEY RESOURCES	1.24	36.68	3.6	10.5	50.0	5.2	0.43	5.7	9.3
NICOR INC	1.86	36.49	5.4	12.4	42.8	5.3	0.08	5.4	11.1
NORTHWEST NATURAL GAS CO	1.58	42.51	3.9	11.6	42.0	4.9	0.57	5.4	9.5
PIEDMONT NATURAL GAS CO	1.08	24.34	4.6	12.9	35.3	4.6	-0.04	4.5	9.3
SOUTH JERSEY INDUSTRIES INC	1.19	34.71	3.7	14.1	51.6	7.3	0.98	8.3	12.1
SOUTHWEST GAS CORP	0.95	24.69	4.0	8.4	50.0	4.2	0.50	4.7	8.8
WGL HOLDINGS INC	1.47	33.41	4.6	10.5	39.6	4.2	0.01	4.2	8.9
Mean	1.38	32.75	4.47	11.60	44.26	5.11	0.49	5.6	10.2
Median	1.32	34.17	4.59	11.59	43.03	4.87	0.50	5.4	9.5

1/ Expected Dividend Yield = (Col (1) / Col (2)) * (1 + Col (8))

2/ BR Growth = Col (4) * (Col (5) / 100)

3/ SV Growth = Percent expected growth in number of shares of stock * Percent of funds from new equity financing that accrues to existing shareholders [1- B/M].

4/ Col (6) + Col (7)

5/ Expected Dividend Yield Col (3) + Sustainable Growth Col (8)

Source: Standard and Poors Research Insight, *Value Line* (September 2009) , www.yahoo.com

DCF COSTS OF EQUITY FOR SAMPLE OF
29 U.S. ELECTRIC UTILITIES
(SUSTAINABLE GROWTH WITH SV AND QUARTERLY COMPOUNDING)

<u>Company</u>	<u>Annualized Last Dividend Paid</u>	<u>Average Daily Closing Prices Aug. 17-Sep. 16, 2009</u>	<u>Expected Dividend Yield ^{1/}</u>	<u>Forecast Return on Common Equity</u>	<u>Forecast Earnings Retention Rate</u>	<u>BR Growth ^{2/} (September 2009)</u>	<u>SV Growth ^{3/} (September 2009)</u>	<u>Sustainable Growth ^{4/} (September 2009)</u>	<u>DCF Cost of Equity ^{5/}</u>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ALLETE	1.76	33.53	5.5	9.6	30.2	2.9	1.29	4.2	9.8
Alliant Energy	1.50	26.53	5.9	10.5	40.0	4.2	0.26	4.5	10.6
Ameren Corp.	1.54	26.57	6.0	8.3	47.7	4.0	-0.08	3.9	10.0
Amer. Elec. Power	1.64	31.16	5.6	10.8	45.7	4.9	0.83	5.8	11.6
Avista Corp.	0.84	19.75	4.4	8.3	31.4	2.6	0.17	2.8	7.2
CenterPoint Energy	0.76	12.49	6.6	17.2	38.7	6.7	1.33	8.0	14.8
Cleco Corp.	0.90	24.55	3.8	11.2	36.0	4.0	0.57	4.6	8.6
CMS Energy Corp.	0.50	13.24	4.0	10.6	46.7	4.9	0.10	5.0	9.1
DPL Inc.	1.14	25.08	5.0	20.0	50.9	10.2	0.81	11.0	16.3
DTE Energy	2.12	35.03	6.3	9.9	37.5	3.7	0.32	4.0	10.6
Edison Int'l	1.24	33.36	4.0	11.4	64.7	7.4	0.00	7.4	11.6
Energy Corp.	3.00	79.53	4.0	13.6	52.5	7.2	-0.07	7.1	11.3
Exelon	2.10	49.67	4.7	20.6	56.4	11.6	-0.43	11.2	16.2
FirstEnergy Corp.	2.20	45.49	5.2	14.8	49.5	7.3	0.00	7.3	12.8
G't Plains Energy	0.83	17.78	4.7	6.8	33.3	2.3	-1.62	0.7	5.5
IDACORP, Inc.	1.20	28.59	4.4	7.8	49.1	4.4	0.08	3.9	8.4
Integrus Energy	2.72	34.62	8.0	8.4	22.3	1.9	0.09	2.0	10.2
Northeast Utilities	0.95	23.94	4.2	9.2	48.9	4.5	1.42	5.9	10.2
Otter Tail Corp.	1.19	23.99	5.1	8.6	31.6	2.7	0.62	3.3	8.6
Pepco Holdings	1.08	14.28	7.8	8.5	40.0	3.4	-0.09	3.3	11.4
PG&E Corp.	1.68	40.32	4.4	12.1	48.2	5.8	0.55	6.4	10.9
Pinnacle West Capital	2.10	32.79	6.6	9.0	32.3	2.9	0.18	3.1	10.0
Portland General	1.02	19.72	5.4	8.5	40.0	3.4	0.20	3.6	9.1
Progress Energy	2.48	39.29	6.5	9.9	28.9	2.9	0.24	3.1	9.9
Public Service Enterprise Group	1.33	31.63	4.6	16.1	54.7	8.8	-0.30	8.5	13.2
TECO Energy	0.80	13.40	6.2	12.2	35.7	4.3	0.15	4.5	11.0
Westar Energy	1.20	20.47	6.0	8.0	34.9	2.8	0.01	2.8	9.0
Wisconsin Energy	1.35	45.25	3.2	12.3	52.2	6.4	0.01	6.4	9.7
Xcel Energy Inc.	0.98	19.68	5.2	10.8	45.0	4.9	0.06	4.9	10.2
Mean	1.45	29.71	5.29	11.21	42.24	4.91	0.23	5.15	10.6
Median	1.24	26.57	5.19	10.49	40.00	4.20	0.15	4.49	10.2

1/ Expected Dividend Yield = (Col (1) / Col (2)) * (1 + Col (8))

2/ BR Growth = Col (4) * (Col (5) / 100)

3/ SV Growth = Percent expected growth in number of shares of stock * Percent of funds from new equity financing that accrues to existing shareholders [1- Book/Market].

4/ Col (6) + Col (7)

5/ Expected Dividend Yield Col (3) + Sustainable Growth Col (8)

Source: Standard and Poors Research Insight, *Value Line* (Various Issues) , www.yahoo.com

**DCF COSTS OF EQUITY FOR 9 SELECTED
U.S. LOCAL NATURAL GAS DISTRIBUTION COMPANIES
(THREE-STAGE MODEL)**

<u>Company</u>	Annualized Last Paid <u>Dividend</u> (1)	Average Daily Closing Prices <u>Aug. 17-Sep. 16, 2009</u> (2)	Current <u>Dividend Yield</u>	Stage 1 Years 1-5 I/B/E/S (Aug 2009) <u>EPS Forecasts</u> (3)	Stage 2 Years 6-10 Avg. I/B/E/S & GDP <u>Growth</u> ^{1/} (4)	Stage 3 Terminal Value GDP <u>Growth</u> ^{1/}	DCF Cost of <u>Equity</u> ^{2/} (5)
AGL Resources	1.72	34.17	5.03	4.5	4.8	5.1	10.4
Atmos Energy	1.32	27.73	4.76	5.0	5.1	5.1	10.3
New Jersey Resources	1.24	36.68	3.38	6.5	5.8	5.1	9.1
Nicor Inc.	1.86	36.49	5.10	4.3	4.7	5.1	10.5
Northwest Nat. Gas	1.58	42.51	3.72	5.2	5.1	5.1	9.2
Piedmont Natural Gas	1.08	24.34	4.44	6.2	5.7	5.1	10.2
South Jersey Inds.	1.19	34.71	3.43	9.6	7.4	5.1	10.0
Southwest Gas	0.95	24.69	3.86	5.7	5.4	5.1	9.3
WGL Holdings Inc.	1.47	33.41	4.41	4.5	4.8	5.1	9.7
Mean	1.38	32.75	4.24	5.7	5.4	5.1	9.8
Median	1.32	34.17	4.41	5.2	5.1	5.1	10.0

1/ Forecast nominal rate of GDP growth, 2011-20

2/ Internal Rate of Return: I/B/E/S EPS forecast growth rate applies for first 5 years, average of I/B/E/S and GDP for next 5 years, GDP growth thereafter.

Source: Standard & Poor's Research Insight; www.yahoo.com; Blue Chip Economic Indicators (June 2009)

DCF COSTS OF EQUITY FOR SAMPLE OF
29 U.S. ELECTRIC UTILITIES
(THREE-STAGE MODEL)

<u>Company</u>	<u>Annualized Last Paid Dividend</u> (1)	<u>Average Daily Closing Prices Aug. 17 - Sep. 16, 2009</u> (2)	<u>Current Dividend Yield</u> (3)	<u>Stage 1 I/B/E/S (August 2009) EPS Forecasts</u> (4)	<u>Stage 2 Average of Stage 1 & 3 Growth Rates</u> (5)	<u>Stage 3 GDP Growth^{1/}</u> (6)	<u>DCF Cost of Equity^{2/}</u> (6)
ALLETE	1.76	33.53	5.25	6.0	5.6	5.1	11.1
Alliant Energy	1.50	26.53	5.65	4.4	4.8	5.1	11.0
Ameren Corp.	1.54	26.57	5.80	3.0	4.1	5.1	10.6
Amer. Elec. Power	1.64	31.16	5.26	3.8	4.4	5.1	10.4
Avista Corp.	0.84	19.75	4.25	8.7	6.9	5.1	10.7
CenterPoint Energy	0.76	12.49	6.08	18.0	11.6	5.1	17.8
Cleco Corp.	0.90	24.55	3.67	12.5	8.8	5.1	11.3
CMS Energy Corp.	0.50	13.24	3.78	6.3	5.7	5.1	9.5
DPL Inc.	1.14	25.08	4.55	9.5	7.3	5.1	11.5
DTE Energy	2.12	35.03	6.05	1.5	3.3	5.1	10.4
Edison Int'l	1.24	33.36	3.72	5.0	5.1	5.1	9.1
Entergy Corp.	3.00	79.53	3.77	10.5	7.8	5.1	10.8
Exelon	2.10	49.67	4.23	4.5	4.8	5.1	9.6
FirstEnergy Corp.	2.20	45.49	4.84	5.0	5.1	5.1	10.4
G't Plains Energy	0.83	17.78	4.66	2.0	3.6	5.1	9.2
IDACORP, Inc.	1.20	28.59	4.20	5.0	5.1	5.1	9.7
Integrus Energy	2.72	34.62	7.86	26.2	15.7	5.1	26.2
Northeast Utilities	0.95	23.94	3.96	8.5	6.8	5.1	10.3
Otter Tail Corp.	1.19	23.99	4.97	7.8	6.5	5.1	11.5
Pepco Holdings	1.08	14.28	7.56	5.5	5.3	5.1	13.6
PG&E Corp.	1.68	40.32	4.17	7.0	6.1	5.1	10.1
Pinnacle West Capital	2.10	32.79	6.40	5.5	5.3	5.1	12.4
Portland General	1.02	19.72	5.17	7.4	6.3	5.1	11.4
Progress Energy	2.48	39.29	6.31	4.4	4.8	5.1	11.8
Public Service Enterprise Group	1.33	31.63	4.21	5.3	5.2	5.1	9.7
TECO Energy	0.80	13.40	5.97	8.2	6.7	5.1	13.0
Westar Energy	1.20	20.47	5.86	3.3	4.2	5.1	10.8
Wisconsin Energy	1.35	45.25	2.99	8.7	6.9	5.1	9.1
Xcel Energy Inc.	0.98	19.68	4.98	6.7	5.9	5.1	11.0
Mean	1.45	29.71	5.04	7.3	6.2	5.1	11.5
Median	1.24	26.57	4.97	6.0	5.6	5.1	10.8

1/ Forecast nominal rate of GDP growth, 2011-20

2/ Internal Rate of Return: I/B/E/S EPS forecast growth rate applies for first 5 years, average of I/B/E/S and GDP for next 5 years, GDP growth thereafter.

Source: Standard & Poor's Research Insight; www.yahoo.com; Blue Chip Financial Forecasts (June 2009)

**DCF-BASED EQUITY RISK PREMIUM STUDY FOR
9 SELECTED U.S. LOCAL NATURAL GAS DISTRIBUTION COMPANIES**

	Expected Dividend Yield	I/B/E/S EPS Growth Forecast	DCF Cost	Moodys Long- Term A-Rated Public Utility Bond Yields	Risk Premium Over Moodys Long-Term A- Rated Public Utility Bonds
Aug-07	4.0	4.8	8.8	6.2	2.7
Sep-07	4.2	4.8	8.9	6.2	2.7
Oct-07	4.1	4.8	8.9	6.1	2.8
Nov-07	4.0	4.9	8.3	6.0	2.3
Dec-07	4.0	4.9	8.4	6.1	2.3
Jan-08	4.2	5.0	8.7	6.1	2.7
Feb-08	4.3	4.9	9.3	6.2	3.1
Mar-08	4.2	5.2	9.3	6.2	3.1
Apr-08	4.2	5.2	9.3	6.2	3.1
May-08	4.0	5.2	9.2	6.4	2.9
Jun-08	4.2	5.3	9.6	6.3	3.3
Jul-08	4.1	5.5	9.7	6.4	3.2
Aug-08	3.8	5.0	9.3	6.3	3.0
Sep-08	3.5	5.0	9.3	7.0	2.3
Oct-08	3.7	5.0	9.4	8.0	1.4
Nov-08	3.7	5.0	9.0	7.2	1.8
Dec-08	3.8	5.0	9.8	6.2	3.6
Jan-09	4.3	5.0	9.7	6.5	3.2
Feb-09	4.9	5.0	10.8	6.4	4.4
Mar-09	4.5	5.0	10.6	6.4	4.2
Apr-09	4.7	5.0	10.6	6.6	4.1
May-09	5.1	5.0	10.8	6.5	4.2
Jun-09	4.8	5.0	10.5	6.0	4.6
Jul-09	4.6	5.0	10.1	5.7	4.4
Aug-09	4.7	5.2	9.9	5.5	4.3
Average	4.2	5.0	9.5	6.3	3.2

1/ Dividend Yield is adjusted for I/B/E/S growth

Source: Standard & Poor's Research Insight, I/B/E/S,

DCF-BASED EQUITY RISK PREMIUM STUDY FOR
29 SELECTED U.S. ELECTRIC COMPANIES

	<u>Expected Dividend Yield</u>	<u>I/B/E/S EPS Growth Forecast</u>	<u>DCF Cost</u>	<u>30 Year Treasury</u>	<u>Risk Premium Over 30-Year Treasury</u>	<u>Moodys Long- Term Baa- Rated Public Utility Bonds</u>	<u>Risk Premium Over Moodys Long-Term Baa- Rated Public Utility Bonds</u>
Aug-07	3.9	5.8	10.4	4.8	5.6	6.5	4.0
Sep-07	3.8	5.8	10.3	4.8	5.5	6.5	3.9
Oct-07	3.6	5.9	10.3	4.7	5.5	6.4	3.9
Nov-07	3.7	6.0	10.7	4.4	6.3	6.3	4.3
Dec-07	3.7	7.3	10.8	4.5	6.4	6.4	4.4
Jan-08	4.1	7.3	11.4	4.4	7.0	6.4	5.0
Feb-08	4.3	7.7	11.7	4.4	7.3	6.6	5.1
Mar-08	4.6	6.7	11.4	4.3	7.1	6.7	4.6
Apr-08	4.2	6.7	11.4	4.5	6.9	6.7	4.7
May-08	4.1	7.3	11.4	4.7	6.7	6.9	4.5
Jun-08	4.3	7.3	11.3	4.5	6.8	6.9	4.4
Jul-08	4.4	6.5	11.4	4.6	6.8	7.0	4.4
Aug-08	4.3	6.9	11.6	4.4	7.1	6.9	4.6
Sep-08	4.5	7.3	11.8	4.3	7.5	7.7	4.1
Oct-08	5.2	7.3	12.4	4.4	8.0	9.3	3.1
Nov-08	5.3	7.3	11.9	3.5	8.4	8.7	3.1
Dec-08	5.3	6.7	11.9	2.7	9.3	7.8	4.2
Jan-09	5.5	6.8	12.1	3.6	8.6	8.0	4.2
Feb-09	6.3	6.7	12.8	3.7	9.1	7.9	5.0
Mar-09	5.9	6.5	12.7	3.6	9.2	8.0	4.7
Apr-09	5.8	6.5	12.9	4.1	8.8	7.9	5.0
May-09	5.9	7.0	12.4	4.3	8.1	7.6	4.9
Jun-09	5.7	6.7	12.0	4.3	7.7	7.0	5.1
Jul-09	5.5	6.3	11.8	4.3	7.5	6.5	5.4
Aug-09	5.3	6.0	11.5	4.2	7.3	6.2	5.3
Average	4.8	6.7	11.6	4.2	7.4	7.1	4.5

1/ Dividend Yield is adjusted for I/B/E/S growth

Source: Standard & Poor's Research Insight, I/B/E/S,
www.federalreserve.gov

BOOK VALUE AND MARKET VALUE CAPITAL STRUCTURES FOR 9 SELECTED U.S. LOCAL NATURAL GAS DISTRIBUTORS

Company	<u>Book Value Common Equity Ratio (Total Capital)</u>			<u>Market Value Common Equity Ratio (Debt at Par)</u>		
	<u>CAPM^{1/}</u>	<u>DCF-Based Risk Premium^{2/}</u>	<u>DCF^{3/}</u>	<u>CAPM^{1/}</u>	<u>DCF-Based Risk Premium^{2/}</u>	<u>DCF^{3/}</u>
AGL RESOURCES INC	41.4%	40.9%	39.4%	55.2%	51.8%	50.8%
ATMOS ENERGY CORP	45.6%	45.8%	45.4%	51.5%	49.7%	50.5%
NEW JERSEY RESOURCES CORP	48.4%	50.6%	51.2%	68.1%	68.4%	69.0%
NICOR INC	46.4%	48.1%	44.0%	64.1%	62.2%	57.1%
NORTHWEST NATURAL GAS CO	47.3%	46.3%	45.3%	61.7%	62.9%	59.7%
PIEDMONT NATURAL GAS CO	47.9%	44.1%	41.9%	66.0%	63.6%	59.2%
SOUTH JERSEY INDUSTRIES INC	46.4%	48.9%	47.5%	64.0%	67.1%	64.4%
SOUTHWEST GAS CORP	38.7%	43.2%	43.5%	46.0%	46.4%	46.6%
WGL HOLDINGS INC	53.2%	52.6%	51.7%	65.0%	64.0%	63.0%
Mean	46.2%	46.7%	45.5%	60.2%	59.6%	57.8%

^{1/} Calculation of market value capital structures based on average of monthly closing prices January 2004-December 2008 and book values per share at the end of each year.

^{2/} Calculation of market value capital structures based on average of monthly closing prices August 2007 to August 2009 and book values per share at the end of 2007 and 2008.

^{3/} Calculation of market value capital structures based on prices used in the DCF analysis and book value per share at the end of 2008.

Source: Research Insight

BOOK VALUE AND MARKET VALUE CAPITAL STRUCTURES FOR 29 SELECTED U.S. ELECTRIC UTILITIES

Company	CAPM ^{1/}	Book Value Common Equity Ratio (Total Capital) DCF-Based			Market Value Common Equity Ratio (Debt at Par) DCF-Based		
		Risk Premium ^{2/}	DCF ^{3/}	DCF ^{3/}	Risk Premium ^{2/}	DCF ^{3/}	
ALLETE INC	61.4%	60.7%	57.8%	77.8%	69.3%	64.4%	
ALLIANT ENERGY CORP	53.7%	57.3%	56.0%	61.8%	63.4%	57.0%	
AMEREN CORP	39.6%	37.9%	45.6%	59.3%	50.3%	40.5%	
AMERICAN ELECTRIC POWER	48.7%	46.3%	37.3%	50.8%	46.5%	40.8%	
AVISTA CORP	42.8%	45.9%	45.5%	47.3%	48.0%	47.4%	
CENTERPOINT ENERGY INC	13.9%	15.7%	16.0%	31.9%	31.3%	28.8%	
CLECO CORP	50.7%	50.6%	47.5%	60.9%	58.4%	55.7%	
CMS ENERGY CORP	23.2%	24.9%	26.0%	28.5%	30.7%	29.9%	
DPL INC	34.3%	36.3%	38.3%	62.5%	63.9%	64.9%	
DTE ENERGY CO	40.0%	40.6%	40.4%	46.1%	42.2%	39.2%	
EDISON INTERNATIONAL	40.0%	42.2%	40.2%	54.2%	52.7%	43.4%	
ENERGY CORP	44.0%	39.7%	38.8%	62.1%	60.3%	54.5%	
EXELON CORP	42.3%	43.9%	45.5%	74.0%	76.5%	71.2%	
FIRSTENERGY CORP	42.5%	40.2%	37.2%	59.3%	58.5%	49.8%	
GREAT PLAINS ENERGY INC	48.0%	47.1%	44.0%	59.1%	48.7%	39.5%	
IDACORP INC	48.1%	47.5%	47.8%	53.3%	49.5%	48.6%	
INTEGRYS ENERGY GROUP INC	48.2%	49.4%	45.6%	55.8%	50.2%	41.6%	
NORTHEAST UTILITIES	36.1%	36.6%	35.1%	42.1%	43.2%	40.1%	
OTTER TAIL CORP	58.2%	55.6%	57.8%	70.9%	67.0%	63.2%	
PEPCO HOLDINGS INC	39.8%	42.1%	41.4%	45.2%	44.3%	34.5%	
PG&E CORP	43.6%	43.9%	43.8%	56.3%	55.7%	54.7%	
PINNACLE WEST CAPITAL CORP	49.7%	48.2%	47.0%	54.2%	47.6%	46.0%	
PORTLAND GENERAL ELECTRIC CO	53.1%	48.7%	47.3%	55.0%	49.7%	45.0%	
PROGRESS ENERGY INC	43.6%	43.7%	42.0%	51.6%	49.5%	46.3%	
PUBLIC SERVICE ENTRP GRP	37.1%	44.2%	46.0%	59.1%	66.9%	63.7%	
TECO ENERGY INC	32.1%	38.3%	37.8%	47.7%	49.2%	46.3%	
WESTAR ENERGY INC	45.6%	45.4%	45.6%	51.5%	47.6%	45.5%	
WISCONSIN ENERGY CORP	40.5%	41.1%	41.2%	52.9%	52.9%	52.6%	
XCEL ENERGY INC	43.0%	43.8%	44.0%	51.2%	50.7%	50.2%	
Mean	42.9%	43.4%	42.7%	54.6%	52.6%	48.5%	

^{1/} Calculation of market value capital structures based on average of monthly closing prices January 2004-December 2008 and book values per share at the end of each year.

^{2/} Calculation of market value capital structures based on average of monthly closing prices August 2007 to August 2009 and book values per share at the end of 2007 and 2008.

^{3/} Calculation of market value capital structures based on prices used in the DCF analysis and book value per share at the end of 2008.

Source: Research Insight