

REBUTTAL TESTIMONY

of

MICHAEL McNALLY

FINANCE DEPARTMENT

FINANCIAL ANALYSIS DIVISION

ILLINOIS COMMERCE COMMISSION

Central Illinois Public Service Company, d/b/a AmerenCIPS
and
Union Electric Company, d/b/a AmerenUE

Proposed General Increase in Gas Rates

Docket Nos. 02-0798/03-0008/03-0009
Consolidated

June 5, 2003

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1

WITNESS IDENTIFICATION

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

3 A. My name is Michael McNally. My business address is 527 East Capitol Avenue,
4 Springfield, IL 62701.

5 **Q. Are you the same Michael McNally who previously testified in this**
6 **proceeding?**

7 A. Yes.

8 **Q. Please state the purpose of your rebuttal testimony in this proceeding.**

9 A. The purpose of my rebuttal testimony is to respond to the rebuttal testimony of
10 Central Illinois Public Service Company ("AmerenCIPS") and Union Electric
11 Company ("AmerenUE") (collectively, the "Companies") witnesses Michael G.
12 O'Bryan (AmerenCIPS/UE Exhibit No. 12.0) and Kathleen C. McShane
13 (AmerenCIPS/UE Exhibit No. 13.0).

14

RESPONSE TO MR. O'BRYAN

15 **Q. Please comment on Mr. O'Bryan's assertion that the March 21, 2003 interest**
16 **rates you applied to AmerenUE's variable rate Environmental Improvement**
17 **("EI") bonds and AmerenCIPS' variable rate 1993 Auction Series preferred**
18 **stock are not consistent with the June 30, 2002 test year or with the**
19 **regulatory concept of test year for rate making purposes.**

20 A. Mr. O'Bryan suggests that the Illinois Commerce Commission ("ICC" or
21 "Commission") should apply the trailing twelve-month average actual interest costs

22 as of June 30, 2002 to AmerenUE's variable rate EI bonds and AmerenCIPS'
23 variable rate 1993 Auction Series preferred stock rather than the March 21, 2003
24 interest rates I used. I disagree with Mr. O'Bryan's argument for two reasons. First,
25 there is no requirement that interest rates be consistent with the test year, as cost of
26 capital and its components are not test year items.¹ Second, historical averages
27 are inappropriate estimates for future short-term interest rates such as those
28 applicable to AmerenUE's EI bonds and AmerenCIPS' 1993 Auction Series
29 preferred stock.

30 **Q. Please explain why historical averages are inappropriate estimates for**
31 **future short-term interest rates.**

32 A. Historical averages are inappropriate estimates for future interest rates because
33 security returns, including interest rates, closely approximate a type of time series
34 called a random walk.² In a random walk, the "future steps or directions cannot be
35 predicted on the basis of past actions."³ In addition, even if securities data were
36 mean reverting, there is no method for determining the true value of that mean.
37 Consequently, sample means, which depend upon the measurement period used,
38 are substituted. Thus, any measurement period chosen is arbitrary, rendering the
39 results uninformative.

40 **Q. Please explain why future interest rates cannot be predicted from a**
41 **historical average.**

42 A. Interest rates must demonstrate a tendency to revert towards some mean value for
43 historical averages to accurately predict future interest rates. Moreover, one must

¹ Order, Docket No. 99-0534, July 11, 2000, p. 22.

² Burton G. Malkiel, *A Random Walk Down Wall Street*, Fourth Edition, Norton, 1985, pp. 132 and 146.

³ *Emphasis added, Ibid.*, p. 16.

44 be able to determine the value of that mean. Thus, Mr. O'Bryan must demonstrate
45 that the trailing twelve-month actual interest cost as of June 30, 2002 represents the
46 mean for short-term interest rates. He has not done so. Indeed, the random walk
47 indicates that either the series exhibits no mean reversion tendency or that its mean
48 is not measurable.

49 **Q. Mr. O'Bryan claims that the use of a twelve-month average smoothes out**
50 **highly volatile short-term interest rates. Will the volatility in short-term**
51 **interest rates render a spot rate an inaccurate estimate of future interest**
52 **rates?**

53 A. Yes. The volatility in short-term interest rates will render any estimate of future short-
54 term interest rates inaccurate to some degree. Yet, that volatility does not imply that
55 all estimates are equally inaccurate. To the contrary, the random walk pattern of
56 short-term interest rates indicates that the last observation, (i.e., the spot yield) is
57 the most accurate, naive estimate of future short-term interest rates available.⁴

58 **Q. To support his use of a historical average interest rate for variable rate debt,**
59 **Mr. O'Bryan cites your use of a twelve-month average to determine**
60 **AmerenUE's short-term debt balance. Is his comparison of volatility in short-**
61 **term interest rates to short-term debt balances appropriate?**

62 A. No. A variable whose volatility exhibits a repeating pattern should not be
63 represented with a single observation from that pattern. A utility's use of short-term
64 debt often displays such a pattern. For instance, the short-term debt usage of gas
65 distribution companies, typically displays a distinct seasonal pattern. As Mr.
66 O'Bryan notes, my decision to include short-term debt in the capital structure was

⁴ George Foster, *Financial Statement Analysis*, Prentice Hall, 1978, p. 83.

67 based on a review of the Companies' use of short-term debt over the course of an
68 entire year to determine if such a pattern exists. The reasoning for this is that a
69 review of past short-term debt use may reveal a pattern of typical short-term debt
70 use that will likely carry forward into the future. In contrast, as the phrase "random
71 walk" implies, short-term interest rates do not exhibit a repeating pattern that can be
72 exploited to improve the accuracy of short-term interest rate forecasts. Thus, use of
73 historical averages merely introduces more outdated interest rates.

74 **Q. Please comment on Mr. O'Bryan's assertion that short-term interest rates as**
75 **of March 2003 were near historic lows and are not representative of rates**
76 **that have been typically observed or are expected in the future.**

77 A. The random walk characteristic of short-term interest rates indicates that short-term
78 interest rates do not exhibit a repeating pattern that can be exploited to improve the
79 accuracy of short-term interest rate forecasts, making the most recent observation
80 the most accurate, naive estimate of future short-term interest rates available.

81 **Q. Has the Commission previously used a spot interest rate for the cost of**
82 **short-term debt?**

83 A. Yes. In Docket No. 99-0534 (a MidAmerican Energy Company gas rate
84 proceeding), the Commission stated the following:

85 Based on the above arguments, it is clear that the cost of short-term
86 and variable rate long-term debt should be measured using current
87 interest rates instead of outdated historical averages and that MEC's
88 cost of short-term and variable long-term debt are 5.57% and 3.80%,
89 respectively. As previously discussed, the Courts found that the cost
90 of capital, and its components are not test year items. Furthermore,
91 the Commission does not accept MEC's contention that current

92 interest rates are embedded rates. These current rates are, in the
93 Commission's opinion, the best estimates of future rates.⁵

94 The Order cites seven other proceedings in which the Commission used the most
95 recent spot rate or a forecasted rate to determine the cost of short-term debt and
96 variable rate long-term debt.

97 **Q. Please comment on Mr. O'Bryan's assertion that the Municipal Market Swap**
98 **Index is a flawed proxy for the interest rate on AmerenUE's EI debt.**

99 A. As Mr. O'Bryan indicates, there is no index that would represent a perfect proxy for
100 the variable interest rates on AmerenUE's EI bonds.⁶ Thus, I recommend using the
101 most recent rates available to AmerenUE for its variable rate EI debt. Those rates
102 are presented in Schedule 13.4 UE.⁷ With that adjustment, AmerenUE's cost of
103 debt increases from 5.60% to 5.94%, as shown on Schedule 13.1 UE.

104 **Q. Please comment on Mr. O'Bryan's assertions that your calculation of the net**
105 **balance of short-term debt for AmerenUE is incorrect.**

106 A. The calculation of AmerenUE's net short-term debt in my direct testimony contains a
107 mathematical error. Part of the calculation was inadvertently omitted. The correct
108 methodology is as follows:

109 The net balance of short-term debt is the greater of a) the monthly
110 ending gross balance of short-term debt outstanding minus the
111 corresponding monthly ending balance of construction-work-in-
112 progress ("CWIP") accruing an allowance for funds used during
113 construction ("AFUDC") or b) the monthly ending gross balance of
114 short-term debt outstanding minus the corresponding monthly ending

⁵ Order, Docket No. 99-0534, July 11, 2000, p. 22.

⁶ AmerenCIPS/UE Exhibit No. 12.0, p. 5.

⁷ Company response to Staff data request MGM 4.01, May 21, 2003.

115 value of CWIP accruing AFUDC times the ratio of short-term debt to
116 total CWIP.

117 An adjustment for this error reduces AmerenUE's average net short-term debt
118 balance of from \$98,086,145 to \$53,322,188, which represents 3.2% of the 45%
119 total debt in the capital structure (i.e., 1.4% of total capital). This adjustment,
120 combined with the adjustment to the cost of long-term debt explained previously,
121 raises AmerenUE's overall cost of capital from 8.00% to 8.19%, as shown on
122 Schedule 13.1 UE.

123 **Q. Why is part "b" of the short-term debt balance formula above necessary?**

124 A. As Mr. O'Bryan notes, since the Companies' last ratemaking proceeding (i.e., ICC
125 Docket No. 00-0802) Staff has further refined its methodology by adding part "b"
126 above to the methodology previously used. This updated methodology, which the
127 Commission has approved,⁸ is necessary to more accurately reflect the cost of
128 short-term debt in the ratemaking process. The ratemaking process should account
129 for the total cost of short-term debt through the accrual of AFUDC on CWIP,
130 inclusion in the overall rate of return on rate base, evidence that it finances other non
131 rate base assets, or a combination of the three. Further, the total cost of short-term
132 debt reflected in AFUDC and in the return on rate base should not exceed a utility's
133 total short-term debt interest.⁹ If the short-term debt costs reflected in AFUDC and
134 in the return on rate base are not measured carefully, double-counting of those costs
135 could result (i.e., if the short-term debt costs included in AFUDC and in the return on

⁸ Second Notice Order, ICC Docket No. 02-0509, March 26, 2003.

⁹ Unless the Commission determines that the utility's capital structure does not include a sufficient proportion of debt. If an imputed capital structure were adopted that contains a higher proportion of debt than the utility's capital structure, the total short-term debt interest in the authorized return on rate base and AFUDC would exceed actual short-term debt interest. Under those circumstances, reflecting a greater amount of short-term debt interest in the authorized return on rate base and AFUDC is appropriate because the imputed capital structure implies that the utility should have issued more debt to more fully exploit the tax deductibility of interest costs.

136 rate base sum to greater than 100% of total short-term debt costs).¹⁰ Thus, proper
137 consideration of short-term debt costs requires the subtraction of the amount of
138 short-term debt that is assumed to be supporting CWIP accruing AFUDC from the
139 total short-term debt balance.

140 The apparent complexity in the formula for determining the amount of short-term
141 debt eligible for inclusion in a utility's capital structure is due to the AFUDC formula,
142 which is not consistent with cost of capital theory, which posits that capital cannot be
143 traced from source to use. The cost of capital formula is:

144
$$CoC = \frac{s \times S + d \times D + p \times P + c \times C}{S + D + P + C}$$

where: CoC = cost of capital
s = cost of short-term debt;
S = balance of short-term debt;
d = cost of long-term debt;
D = balance of long-term debt;
p = cost of preferred stock;
P = balance of preferred stock;
c = cost of common equity; and
C = balance of common equity.

145 Whereas the cost of capital weights each capital component with respect to the
146 proportion of its balance to total capitalization (i.e., $S + D + P + C$), the AFUDC
147 formula separates capital into two components: (1) short-term debt; and (2) long-

¹⁰ The Commission raised this concern in ICC Order, Docket No. 95-0076, December 20, 1995, p. 51.

148 term capital (i.e., long-term debt, preferred stock, and common equity). The
149 AFUDC formula is:

150
$$AFUDC = s \times \frac{S}{W} + \left(\frac{d \times D + p \times P + c \times C}{D + P + C} \right) \left(1 - \frac{S}{W} \right)$$

where: W = balance of CWIP.

151 In the AFUDC formula, the cost of short-term debt is weighted by the proportion of
152 the balance of short-term debt to CWIP. In contrast, the cost of each component of
153 long-term capital (i.e., *D*, *P*, and *C*) is first weighted by the proportion of its amount
154 to total long-term capital and then weighted by one minus the proportion of short-
155 term debt to CWIP.¹¹ This approach gives short-term debt “priority” in establishing
156 the AFUDC rate. For example, even if short-term debt comprised 5% of total
157 capital, if the balance of short-term debt equaled or exceeded the balance of CWIP,
158 then the AFUDC rate would equal the cost of short-term debt; the cost of the long-
159 term components of the capital structure would be excluded from the AFUDC rate
160 completely.

161 The AFUDC formula only determines the relative contributions of each source of
162 capital to the AFUDC rate, it does not determine the amount of each source of
163 capital that is reflected in AFUDC. To determine the amount of short-term debt that
164 supports CWIP accruing AFUDC to subtract from the total short-term debt balance,
165 the proportion of AFUDC that short-term interest comprises must be determined.
166 The Commission rule for calculating the AFUDC rate assumes that short-term debt
167 is the first, but not necessarily only, source of capital used to determine the AFUDC

¹¹ The ratio of short-term debt to CWIP (*S/W*) is constrained to less than or equal to one.

168 rate.¹² If the ratio of short-term debt to total CWIP is less than one, then short-term
169 debt can be assumed to finance no more than that proportion of CWIP accruing
170 AFUDC.¹³

171 For example, in Table 1 below, short-term debt is 50% of total CWIP (i.e.,
172 \$1,000,000 of short-term debt ÷ \$2,000,000 in total CWIP) during the month of
173 January. Therefore, the interest rate on short-term debt composes 50% of the
174 AFUDC rate for that month. To determine the dollar amount of short-term interest
175 reflected in AFUDC, the amount of CWIP that actually accrues AFUDC must be
176 used. Referring again to the example in Table 1, since the short-term debt interest
177 rate composes 50% of the AFUDC rate, short-term debt would be assumed to
178 finance 50%, or \$800,000, of the \$1,600,000 in CWIP that is accruing AFUDC
179 during the month of January. Thus, the cost of that \$800,000 of short-term debt
180 would be reflected in AFUDC, leaving \$200,000 to be reflected in the overall return
181 on rate base.¹⁴ In contrast, during the month of February, short-term debt interest
182 composes 100% of the AFUDC rate. Thus, the cost of \$400,000 of short-term debt
183 would be reflected in AFUDC, leaving \$600,000 to be reflected in the overall return
184 on rate base.

¹² For electric utilities, the AFUDC rate formula is set forth in plant instruction 3(A)(17)(a) of Ill. Adm. Code 415.

¹³ Obviously, short-term debt can be assumed to finance no more than 100% of CWIP.

¹⁴ Using the \$2 million balance of total CWIP rather than the \$1.6 million balance of CWIP accruing AFUDC would imply that the entire \$1 million in short-term debt is supporting CWIP through the AFUDC rate. However, that is not possible since \$400,000 of CWIP is not accruing AFUDC at all.

Table 1

Month	Short-term Debt	Total CWIP	CWIP accruing AFUDC	Net Short-term Debt - Greater of: ¹⁵	
	(A)	(B)	(C)	(A) – (C)	(A) – (((A)/(B))* (C))
January	\$1,000,000	\$2,000,000	\$1,600,000	-\$600,000	\$200,000
February	\$1,000,000	\$500,000	\$400,000	\$600,000	\$200,000
March	\$1,000,000	\$2,000,000	\$2,000,000	\$0	\$0

185 Mr. O'Bryan raises concern that Staff's methodology guarantees a positive balance
186 of short-term debt as long as short-term debt, CWIP, and CWIP accruing AFUDC
187 are positive. However, under Staff's updated methodology, there would be no net
188 short-term debt balance in a given month even if short-term debt, CWIP, and CWIP
189 accruing AFUDC are positive so long as 1) gross short-term debt is less than or
190 equal to total CWIP and 2) all of the company's CWIP is accruing AFUDC (see
191 March example in Table 1).

192 **RESPONSE TO MS. McSHANE**

193 **Q. Please evaluate Ms. McShane's rebuttal testimony.**

194 A. Ms. McShane's rebuttal testimony contains nothing to change my opinion of the
195 Companies' capital structures or costs of common equity. In my judgment, the
196 investor required rate of return on common equity for AmerenCIPS is 10.62%, while
197 the investor required rate of return on common equity for AmerenUE is 10.37%.

198 **Capital Structure Adjustment**

199 **Q. Ms. McShane argues that although your cost of equity adjustment by itself**
200 **is reasonable, the additional adjustment you made to AmerenUE's capital**

¹⁵ Section 285.4020(b).

201 **structure is unwarranted and would constitute "double counting." Do you**
202 **agree?**

203 A. No. AmerenUE's capital structure is not appropriate for ratemaking purposes. A
204 utility capital structure that, in isolation, reflects a credit rating in the AAA range, as
205 AmerenUE's June 30, 2002 capital structure does, is unnecessarily expensive.
206 Therefore, an adjustment needs to be made to the capital structure, the cost of
207 equity, or both. As explained in my direct testimony, my recommended adjustment
208 consists of two smaller adjustments, one to the capital structure and one to the cost
209 of equity, rather than a single larger adjustment. The capital structure adjustment I
210 recommend establishes a reasonable capital structure for an AA-rated utility with a
211 business profile of 3. AmerenUE's actual capital structure includes 37.89% debt,
212 which is well below the low end of the S&P debt ratio benchmark range of 42.0% to
213 47.5% for AA-rated companies. Therefore, I recommend using an imputed capital
214 structure including 45% debt, which is consistent with that of an AA-rated utility with
215 a business profile of 3. However, the Gas Sample, from which my cost equity was
216 derived, has an average credit rating of only A. Thus, even with the adjustment to
217 AmerenUE's capital structure, the imputed level of financial risk of the Gas Sample
218 remains considerably higher than that of AmerenUE. Therefore, to establish a
219 reasonable cost of equity estimate for AmerenUE, a 25 basis point adjustment to
220 the cost of equity of the Gas Sample is also necessary. If my cost of equity
221 adjustment were not made, a much larger capital structure adjustment would be
222 required, as the difference between the level of financial risk of the Gas Sample and
223 that of AmerenUE would be greater.

224 In addition, the implied pre-tax interest ratio resulting from the application of my cost
225 of capital recommendations to the AmerenUE's actual capital structure also
226 indicates that AmerenUE's actual capital structure is not appropriate for ratemaking

227 purposes. As shown on Schedule 13.5, the resulting implied pre-tax interest
228 coverage ratio using AmerenUE's actual capital structure would be approximately
229 5.8x. S&P's guidelines for pre-tax interest coverage ratios for companies with
230 business profile scores of 3 range from 3.4 to 4.0 for an AA rating.¹⁶ Thus, the pre-
231 tax interest coverage ratio associated with AmerenUE's actual capital structure is
232 unreasonably high relative to the guidelines for a company with a level of business
233 risk similar to AmerenUE's to maintain an AA rating. Moreover, the resulting
234 implied pre-tax interest coverage ratio using my recommendation would be
235 approximately 4.6x. Thus, my recommendation, including an adjustment to
236 AmerenUE's capital structure, is quite generous in terms of financial strength.

237 **Q. Ms. McShane argues that AmerenUE's proposed equity ratio is reasonable**
238 **because it lies within the range of the common equity ratios for your Gas**
239 **Sample. Do you agree?**

240 A. No. First, her comparison to a range is not meaningful. The basis for Ms.
241 McShane's conclusion that AmerenUE's capital structure is reasonable is her focus
242 on the range of her comparison groups. That is, rather than focus on the central
243 tendency of the sample, she focuses on the most extreme high and low equity ratios.
244 As shown in Table 1 of Ms. McShane's rebuttal testimony, the Company's
245 recommended equity ratio of 60.3% exceeds that of every company in the sample
246 but one. Nevertheless, she concludes that since AmerenUE's common equity ratio
247 within the range maintained by the companies in the Gas Sample and is just over
248 one standard deviation from the mean, it is reasonable. Unfortunately, Ms.
249 McShane's approach presumes that the companies in the Gas Sample have capital
250 structures that are reasonable for ratemaking purposes. However, the mere

¹⁶ Standard & Poor's, *Research: Utility Financial Targets Are Revised*, www.ratingsdirect.com, June 18, 1999.

251 existence of companies with higher common equity ratios does not demonstrate
252 that AmerenUE's equity ratio is suitable for ratemaking purposes. A logical
253 approach to determining the reasonableness of a capital structure would be to
254 compare it to the typical (i.e., average) equity ratio, rather than to extreme
255 observations, which are more likely to be unreasonable themselves. The 60.3%
256 equity ratio of AmerenUE's proposed capital structure exceeds the 2002 mean
257 equity ratio presented in Table 1 by 8%, which suggests that AmerenUE's proposed
258 capital structure is not reasonable for ratemaking purposes.

259 Second, Ms. McShane's comparison is misleading. The rate setting process
260 should account for the cost of all capital a company employs. Accordingly, capital
261 structure ratios, including equity and debt ratios, should represent the fraction of
262 total capital that an individual capital component composes. However, the capital
263 structure ratios presented in Table 1 of Ms. McShane's rebuttal testimony reflect
264 neither short-term debt nor long-term debt that is maturing within one year.¹⁷ The
265 exclusion of short-term debt and long-term debt that is maturing within one year
266 understates the balance of total capital and, in turn, inflates the calculated equity
267 ratio (i.e., equity divided by total capital). The total debt ratios including all short-
268 and long-term debt would be significantly higher than the long-term debt ratios
269 presented in Table 1 of Ms. McShane's rebuttal testimony. For example, the 2001
270 capital structures based on total debt rather than long-term debt maturing in more
271 than one year are:¹⁸

¹⁷ Value Line does not include short-term debt or long-term debt due within one year in its calculation of total capital. Value Line, "How to Invest in Common Stocks: A Guide to Using the Value Line Investment Survey," p. 49.

¹⁸ The Value Line Investment Survey, March 21, 2003. pp 460-477.

TABLE 2

2002 Value Line Capital Structures for Gas Sample			
Company	Total Debt	Preferred Stock	Common Equity
AGL Resources, Inc.	65.4%	0.0%	34.6%
Atmos Energy Corp.	64.2%	0.0%	35.8%
Laclede Group	62.2%	0.2%	37.6%
New Jersey Resources	58.0%	0.0%	42.0%
NICOR, Inc.	47.7%	0.4%	51.9%
Northwest Natural Gas	48.5%	3.3%	48.2%
Peoples Energy	56.6%	0.0%	43.4%
Piedmont Natural Gas	48.5%	0.0%	51.5%
WGL Holdings	51.0%	1.7%	47.3%
Mean	55.8%	0.6%	43.6%
Median	56.6%	0.0%	43.4%
Range	47.7 – 65.4%	0.0 – 3.3%	34.6 – 51.9%
± 1 Standard Deviation	48.7 – 62.9%	0.0 – 1.8%	37.0 – 50.2%
AmerenUE Actual¹⁹	37.9%	2.57%	59.6%
Staff Proposal	45.0%	2.3%	52.7%

272 In contrast to Ms. McShane’s comparison, my recommendation is based on capital
273 structures including total debt. Also, the S&P guidelines cited in my direct testimony
274 are total debt ratio targets. As Table 2 clearly demonstrates, AmerenUE’s actual
275 capital structure is not in line with those of the Gas Sample, upon which my cost of
276 equity estimate was based. AmerenUE’s actual total debt ratio is almost ten
277 percentage points below the low end of the range for the Gas Sample and is almost
278 18 percentage points below the mean. Likewise, AmerenUE’s actual common
279 equity ratio is almost eight percentage points above the high end of the range for
280 the sample and is 16 percentage points above the mean. Furthermore, contrary to
281 Ms. McShane’s claims, even after adjusting the total debt ratio upward and the
282 common equity ratio downward, Staff’s proposed capital structure is still
283 significantly more conservative than the typical capital structure in the Gas Sample.

¹⁹ After correcting the calculation of the short-term debt balance, as explained previously.

284 This is consistent with the fact that Staff's proposed capital structure
285 recommendation reflects an AA credit rating, while the Gas Sample's average
286 credit rating is A, and is precisely why, in addition to the capital structure
287 adjustment, a 25 basis point cost of equity adjustment is necessary.

288 **Q. Ms. McShane makes the same comparison using forecasted capital**
289 **structures? How do you respond?**

290 A. Again, Ms. McShane's comparison is not appropriate. Ms. McShane's comparison
291 using forecasted capital structure ratios suffers the same shortcomings noted
292 above.

293 **Q. Ms. McShane notes that some utilities with business profile scores of 3 still**
294 **receive AA ratings even though their debt ratios do not fall within S&P's**
295 **relatively narrow guidelines for an AA rating. She suggests that the range of**
296 **acceptable debt ratio values is significantly wider than the S&P guideline**
297 **range. Do you agree?**

298 A. No. The capital structure is but one factor used to determine a credit rating. It is
299 possible for a utility to receive a given credit rating despite having a debt ratio
300 outside the benchmarks for that rating. However, that indicates that there are other
301 factors, such as the utility's pre-tax interest coverage, that offset the difference
302 between the financial risk implied by the utility's debt ratio and that implied by the
303 benchmarks. Ms. McShane has not demonstrated that weakness in other factors
304 requires AmerenUE to maintain a more conservative capital structure than that
305 suggested by the benchmark. The above notwithstanding, as noted previously, if
306 AmerenUE's cost of equity exclusive of a 25 basis point adjustment were found to
307 be acceptable, a much larger capital structure adjustment would be required, since

308 the difference between the level of financial risk of the Gas Sample, from which the
309 cost of equity was derived, and that of AmerenUE would be greater.

310 **CAPM Results**

311 **Q. Ms. McShane notes that “recent betas” calculated by Bloomberg and Value**
312 **Line for your Gas Sample are significantly higher than your regression beta**
313 **and suggests your regression beta should be disregarded. Do you agree?**

314 A. No. The methodology I used to calculate the Gas Sample betas, which Staff has
315 regularly used, is the same methodology used by Merrill Lynch²⁰ and is widely
316 accepted. The Value Line and Bloomberg methodologies are not inherently
317 superior to Staff’s methodology. Each methodology is subject to error in its
318 measurement of the non-constant relationship between the returns of a security and
319 the overall market through an analysis of a sample of observations. Different
320 methodologies can produce different betas because those methodologies employ
321 different samples. In the past, Staff had little need to include Value Line beta
322 estimates in its analyses, since the Merrill Lynch and Value Line methodologies
323 produced very similar results. However, the difference that currently exists between
324 the Value Line results and my regression analysis results led me to include the
325 Value Line beta with the regression beta Staff regularly uses.

326 **Q. Ms. McShane suggests that Staff’s regression beta is inferior because it is**
327 **based on data from “a 5-year historic period [January 1998 through January**
328 **2003] during which there was significant decoupling of utility stock from the**

²⁰ Except for the substitution of the NYSE Composite Index for the S&P500 Index as a proxy for the market return. Using the NYSE Composite Index as a proxy for the market return produced higher betas than using the S&P500 Index.

329 **rest of the market.” She implies that the Value Line and Bloomberg betas**
330 **are more recent, making them superior reflections of the forward-looking**
331 **beta. Is she correct?**

332 A. No. At best, those betas are not appreciably more recent than the regression betas
333 and may, in fact, be older. The regression betas were calculated on March 24,
334 2003 using a measurement period extending through January 2003. Given the
335 March 2003 publishing date of the betas presented in Table 5 of Ms. McShane’s
336 rebuttal testimony, the time period over which those betas were measured must
337 have ended some time before that. Therefore, even if the measurement period for
338 the Value Line and Bloomberg betas extends through February 2003, which is
339 doubtful, it still overlaps with roughly 98% of the measurement period used for the
340 regression betas. Nevertheless, I have recalculated the regression beta using five
341 years of data from March 1998 through March 2003. The resulting regression beta
342 remained .50. Thus, even regression betas based on data at least as recent as that
343 used to calculate the Value Line and Bloomberg betas Ms. McShane cites would
344 not change the results of my analysis.

345 **Q. What is your response to Ms. McShane’s claims of a significant decoupling**
346 **of utility stocks from the rest of the market?**

347 A. First, she provides no evidence to support her conclusion that the inclusion of the
348 “boom and bust” period from 1998 through 2000 in a beta calculation produces
349 betas that diverge from the “typical LDC/overall equity market risk relationship.”
350 That is, Ms. McShane has failed to establish what the “typical” relationship between
351 the Gas Sample returns and overall market returns is. In fact, one cannot make such
352 a demonstration since true betas are unobservable and change over time. Second,
353 the Value Line betas were calculated from essentially the same five-year
354 measurement period as the regression betas. Thus, even if betas calculated from

355 the last 5 years are anomalous, Value Line betas would suffer the same
356 shortcoming and would be no more representative of the investment risk of my Gas
357 Sample than the regression beta. Third, although the Bloomberg betas were
358 calculated using only two years of data, and thus do not include data from 1998
359 through 2000,²¹ that approach has the drawback of fewer observations. As noted
360 previously, the relationship between individual company returns and those of the
361 overall market is not constant. Thus, any calculation of beta is merely an estimate of
362 that relationship based on a sample of observations. All else equal, more
363 observations produce a more reliable estimate. Further, Ms. McShane has not
364 demonstrated that the past two-year period better reflects the “typical LDC/overall
365 market relationship” than the past five years. Finally, the fact that the Value Line
366 betas, which include data from the 1998-2000 “boom and bust” period, are actually
367 slightly higher than the Bloomberg betas suggests that the inclusion of 1998 through
368 2000 data may not reduce beta estimates as Ms. McShane implies.

369 Ms. McShane also implies that since two highly respected sources of financial
370 information such as Value Line and Bloomberg report similar beta values, which
371 differ from the regression beta, those betas must be more representative of the
372 investment risk of the Gas Sample than the regression betas. Such a conclusion is
373 not warranted. As note previously, Staff’s methodology is based on widely
374 accepted methodology of a highly respected organization. Moreover, Staff’s
375 methodology produces regression statistics, which verify the validity of the
376 regression. To my knowledge, such regression statistics are unavailable for Value
377 Line and Bloomberg betas. It is not reasonable to abandon a beta calculation that
378 is verifiable in favor of two that are not. Finally, merely locating a second source

²¹ The Companies’ response to Staff data request MGM 3.01.

379 whose beta value is similar to Value Line's beta value does not prove the
380 regression beta to be inappropriate. For example, betas published by Zacks,
381 another highly respected sources of financial information, produce a Gas Sample
382 beta of 0.38, which is lower than the regression beta of 0.50.²² The disparity in beta
383 estimates only demonstrates the dynamism of the market in recent years. It does
384 not indicate which beta estimates are superior.

385 **Q. Ms. McShane claims that forecasts of the risk free rate indicate that**
386 **expectations are approximately 6.0%. She concludes that 6.0% risk-free**
387 **rate should be used. Do you agree?**

388 A. No. As explained on pages 23-24 of my direct testimony, the nominal risk-free rate
389 should reflect only the real risk-free rate plus a premium for expected inflation.
390 However, due to relatively long terms to maturity, U.S. Treasury bond ("T-bond")
391 yields are also exposed to interest rate risk, thus a maturity risk premium is
392 charged.²³ Despite this maturity premium, the yield on T-bonds is currently below
393 implied forecasts of the long-term nominal risk-free rate.

394 Obviously, a discrepancy exists between the real risk-free rate and inflation
395 expectations imbedded in the long-term forecasts Ms. McShane cited and those
396 embedded in the T-bond yield. That is, those long-term forecasts are not in line with
397 expectations of the investing public (as reflected in T-bond yields), for investors are
398 willing to accept a lower return than the forecasts suggest.

²² Using the same upward adjustment applied to the raw regression betas.

²³ Brigham, Gapenski, Ehrhardt, Financial Management, Theory and Practice, The Dryden Press, ninth edition, 1999, at 134-136.

399 It is important to note that T-bond yields reflect market forces, while forecasts do not.
400 The true risk-free rate is reflected in the return investors are willing to accept in the
401 market. As of March 21, 2003, investors were willing to accept a 5.24% return on T-
402 bonds, despite the T-bonds inclusion of a maturity premium.²⁴ That the T-bond yield
403 includes a maturity premium indicates that the true long-term risk-free rate is actually
404 below 5.24%.

405 **Market Value vs. Book Value**

406 **Q. Ms. McShane disagrees with your conclusion that a fair rate of return is**
407 **determined exogenously from the ratemaking process and states that “[n]o**
408 **one would reasonably claim that the fair return would be the same whether**
409 **the rate base were measured on the basis of original cost, current cost,**
410 **replacement, trended original cost or fair value.” How do you respond?**

411 A. The Commission has consistently used the investor-required rate of return, based
412 on DCF and CAPM methodologies, as the fair return to apply to book value rate
413 base. That rate is determined exogenously from the rate making process. As
414 noted in my direct testimony, the Commission has acknowledged that it is investors,
415 not the Commission, who determine the required rate of return, stating “The
416 Commission, in authorizing a rate of return, makes an estimate of what the investor
417 is demanding. It is the Commission that reacts to the investor, not vice-versa.”²⁵
418 The Commission does not control what investors pay for a share of stock, nor does
419 it control investors’ expectations for dividends and growth; the Commission simply
420 evaluates investors’ behavior to ascertain investors’ rate of return requirements.
421 The Commission then applies that market-determined rate of return to the amount of

²⁴ The implied yield on 30-year U.S. Treasury bonds has since fallen to 4.53% as of May 29, 2003.

²⁵ Order, Docket No. 92-0448/93-0239 Consol., October 11, 1994, p. 172.

422 equity capital invested in assets that are determined to be serving customers. That
423 produces the fair dollar return on equity investment. Any equity capital that the
424 Commission determines is not serving customers should be either earning an
425 adequate return for investors through non-regulated operations or should be
426 redirected to a more productive use.

427 As Ms. McShane indicates, the fair rate of return would be different if applied to a
428 rate base that differed from book value. In order to achieve the same outcome
429 given a different rate base value, the “fair” rate of return would necessarily differ from
430 that applied to book value. For example, the “fair” rate of return to apply to a market
431 value rate base when the market value exceeds book value, would actually be lower
432 than the investor-required rate of return I recommended, as I will discuss in more
433 detail below.

434 **Q. Ms. McShane claims that Tobin’s Q Ratio concept supports her argument**
435 **for a market value to book value adjustment? Do you agree?**

436 A. No. Ms. McShane continues to make the same argument, however, after
437 introducing the concept of Tobin’s Q Ratio, she merely substitutes the term
438 replacement cost for market value. But market value does not necessarily equate to
439 replacement cost; market value could be higher, lower, or the same as replacement
440 cost. The Q Ratio concept does not state that there is any causal relationship
441 between replacement cost and market value. Tobin’s Q Ratio merely theorizes that
442 the market value of a company, which reflects the present value of that company’s
443 expected future cash flows, should equal or exceed the replacement cost of its
444 assets. That is, a company should be able to put its assets to use in such a manner
445 as to derive at least as much value from those assets as it invests in them. If
446 investors believe that a dollar invested in company assets would produce less than

447 one dollar of value, they should consider either liquidating the company's assets or
448 replacing its management. Thus, Tobin's Q is actually a measure of how efficiently
449 a company is run, not a measure of market value. Ultimately, Ms. McShane's
450 argument remains that if the market value (or replacement cost) of a company
451 exceeds the book value, then the market derived rate of return must be adjusted
452 upward if a book value rate base is to be used in setting rates. That argument is
453 fundamentally flawed and has been repeatedly rejected by the Commission, as
454 explained on pages 39 through 41 of my direct testimony.

455 **Q. Why does the application of a market derived rate of return to a book value**
456 **rate base not short-change investors?**

457 A. First, if investors believed that the Commission's consistent policy of applying the
458 market-derived investor required returns to book value rate base, which is contrary
459 to Ms. McShane's recommendations, did not provide an adequate return, they
460 would certainly not bid up the price of the stock of Illinois utilities. Market values do
461 not arise out of thin air. Investors would not have bid up the market values of Illinois
462 utilities to current levels if they did not believe that the Commission will continue to
463 permit Illinois utilities to charge rates that will support current market values. Of
464 course, those rates reflect, in part, the Commission's consistent policy of rejecting
465 the market-to-book adjustment and comparable earnings analysis that Ms.
466 McShane misguidedly favors.

467 Second, the implied pre-tax interest coverage ratios produced by my
468 recommendations equal 3.5x for AmerenCIPS and 4.6x for AmerenUE.²⁶ For an A

²⁶ The calculation of these ratios is shown on Schedule 13.5. The calculation for AmerenUE includes the effect of the adjustments to the balance of short-term debt and the cost of long-term debt explained previously.

469 rating, S&P's guidelines for pre-tax interest coverage ratios range from 2.8x to 3.4x
470 for companies with business profile scores of 3. For an AA rating, S&P's
471 guidelines for pre-tax interest coverage ratios range from 3.4x to 4.0x for
472 companies with business profile scores of 3. Thus, my recommendations produce
473 generous implied pre-tax interest coverage ratios for both AmerenCIPS and
474 AmerenUE.

475

Comparable Earnings Methodology

476 **Q. Please respond to Ms. McShane's defense of her Comparable Earnings**
477 **methodology.**

478 A. Ms. McShane opines that "it is timely for the Commission to revisit the rationale of
479 the comparable earnings test as the industry moves into a more competitive
480 environment."²⁷ However, there is no connection between competition and the
481 validity of cost of equity methodologies, and even if there were, the Commission is
482 not setting rates for competitive services. Natural gas distribution operations
483 remain rate regulated and the comparable earnings model remains inappropriate
484 for use in rate setting due to its erroneous assumption that accounting returns are
485 acceptable substitutes for investor required returns, as explained in my direct
486 testimony.

²⁷ AmerenCIPS/UE Exhibit No. 13.0, p. 16.

487 **Q. Ms. McShane indicates that your recommendation to disregard her**
488 **Comparable Earnings methodology was based, in large part on the**
489 **Commission Order in 99-0121. Are you aware of any other cases in which a**
490 **comparable earnings methodology was rejected?**

491 A. Yes. The Commission has rejected the comparable earning methodology in at least
492 three other cases in addition to AmerenCIPS and AmerenUE's initial delivery
493 services tariff case, Docket No. 99-0121. The Commission, in Docket No. 91-
494 0193, concluded:

495 comparable earnings analysis should be given little weight due to its
496 assumption that the earned rate of return on book equity equals the
497 current investor-required return on the market value of a firm's
498 common equity.²⁸

499 The Commission has also rejected the comparable earnings approach in Docket
500 Nos. 89-0033 and 92-0448/93-0239 Consolidated.²⁹

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

502 A. Yes.

²⁸ Order, Docket No. 91-0193, March 18, 1992, pp. 109-110.

²⁹ Order on Remand, Docket No. 89-0033, November 4, 1991, p. 15 and Order, Docket No. 92-0448/93-0239 Consol., October 11, 1994, p. 173.

AmerenUE

Weighted Average Cost of Capital
June 30, 2002

Company Proposal

	<u>Amount</u>	<u>Percent of Total Capital</u>	<u>Cost</u>	<u>Weighted Cost</u>
Long-term Debt	\$1,637,741,353	37.094%	5.941%	2.204%
Preferred Stock	\$114,502,040	2.593%	5.189%	0.135%
Common Equity	<u>\$2,662,834,920</u>	<u>60.312%</u>	<u>12.750%</u>	<u>7.690%</u>
Total Capital	\$4,415,078,313	100.00%		
Weighted Average Cost of Capital				10.029%

Staff Proposal

(imputed capital structure)

	<u>Percent of Total Capital</u>	<u>Cost</u>	<u>Weighted Cost</u>
Short-term Debt	1.4%	1.39%	0.02%
Long-term Debt	43.6%	5.94%	2.59%
Preferred Stock	2.3%	5.19%	0.12%
Common Equity	<u>52.7%</u>	<u>10.37%</u>	<u>5.46%</u>
Total Capital	100.0%		
Weighted Average Cost of Capital			8.19%

AmerenUE

Weighted Average Cost of Capital June 30, 2002

Company Proposal with Staff Adjustments (actual June 30, 2003 Capital structure)

	<u>Amount</u>	<u>Percent of Total Capital</u>
Short-term Debt	\$53,322,188	1.20%
Long-term Debt	\$1,635,699,280	36.69%
Preferred Stock	\$114,502,040	2.57%
Common Equity	<u>\$2,655,076,011</u>	<u>59.55%</u>
Total Capital	\$4,458,599,519	100.00%

AmerenUE

Balance of Short-term Debt
June 30, 2002

End of Month Balance

Date (A)	Gross Short-term Debt Outstanding (B)	CWIP (C)	CWIP Accruing AFUDC (D)	Net Short-term Debt Outstanding (E)	Monthly Average (F)
Dec-01	\$ 101,840,000	\$ 441,239,521	\$ 289,839,299	\$ 34,943,830	
Jan-02	191,140,000	424,399,324	276,198,217	\$ 66,746,477	\$ 50,845,153
Feb-02	184,690,000	437,869,603	288,966,993	\$ 62,805,965	64,776,221
Mar-02	192,050,000	428,494,999	302,747,640	\$ 56,359,538	59,582,752
Apr-02	198,150,000	433,177,031	289,783,699	\$ 65,593,018	60,976,278
May-02	161,850,000	308,098,444	292,876,306	\$ 7,996,480	36,794,749
Jun-02	259,650,000	305,546,717	177,248,534	\$ 109,026,284	58,511,382
Jul-02	174,250,000	319,433,170	161,169,863	\$ 86,332,240	97,679,262
Aug-02	60,050,000	341,376,855	173,555,485	\$ 29,520,669	57,926,455
Sep-02	108,900,000	351,341,248	212,755,785	\$ 42,955,266	36,237,968
Oct-02	48,900,000	374,895,074	222,548,094	\$ 19,871,606	31,413,436
Nov-02	54,100,000	379,236,215	246,647,900	\$ 18,914,406	19,393,006
Dec-02	264,500,000	422,069,510	242,478,875	\$ 112,544,787	65,729,596
Average					\$ 53,322,188

Notes:

Column (B) excludes proceeds from short-term debt issuances that AmerenUE lent to other member companies of the Ameren utility money pool.

Column (E) = the greater of [Column (B) - Column (D)] or [Column (B) - (Column (D) * (Column (B) / Column (C))]

Column (F) = [Column (E) + Column (E) from the previous row] / 2

Source: Company response to Staff Data Request MGM 1.02

AmerenUE

Embedded Cost of Long-term Debt
June 30, 2002

Debt Issue Type, Coupon Rate (A)	Date Issued (B)	Maturity Date (C)	Original Principal Amount (D)	Face Amount Outstanding (E)	Unamortized		Carrying Value (H)	Coupon Interest Expense (I)	Amortization		Total Expense (L)	
					Debt Discount or (Premium) (F)	Unamortized Debt Expense (G)			of Debt Discount or (Premium) (J)	Amortization of Debt Expense (K)		
First Mortgage Bonds												
1 7.65% Series 7.65%	28-Jan-92	15-Jul-03	\$100,000,000	\$100,000,000		\$71,363	\$99,928,637	\$7,650,000		\$68,546	\$7,718,546	
2 7.38% Series 7.375%	22-Oct-92	15-Dec-04	85,000,000	85,000,000	\$60,143	126,909	84,812,948	6,268,750	\$24,419	51,526	6,344,694	
3 8.00% Series 8.0%	22-Oct-92	15-Dec-22	85,000,000	85,000,000	716,963	534,647	83,748,391	6,800,000	35,018	26,113	6,861,132	
4 6.88% Series 6.875%	1-Aug-93	1-Aug-04	188,000,000	188,000,000	251,564	244,874	187,503,563	12,925,000	120,342	117,141	13,162,483	
5 6.75% Series 6.75%	1-May-93	1-May-08	148,000,000	148,000,000	244,484	473,697	147,281,819	9,990,000	41,856	81,097	10,112,953	
6 7.15% Series 7.15%	1-Aug-93	1-Aug-23	75,000,000	75,000,000	591,638	584,047	73,824,315	5,362,500	28,038	27,678	5,418,216	
7 5.45% Series 5.45%*	1-Oct-93	1-Oct-28	44,000,000	44,000,000	256,139	470,375	43,273,486	2,398,000	9,749	17,903	2,425,651	
8 7.00% Series 7.0%	15-Jan-94	15-Jan-24	100,000,000	100,000,000	136,774	667,550	99,195,676	7,000,000	6,344	30,964	7,037,308	
9 5.25% Series AA	22-Aug-02	1-Sep-12	173,000,000	173,000,000	202,410	1,374,500	171,423,090	9,082,500	20,169	136,962	9,239,631	
10 5.50% Series BB	10-Mar-03	15-Mar-34	184,000,000	184,000,000	2,055,280	1,860,000	180,084,720	10,120,000	66,223	59,931	10,246,154	
			\$1,182,000,000	\$1,182,000,000	\$4,515,395	\$6,407,961	\$1,171,076,645	\$77,596,750	\$352,158	\$617,862	\$78,566,770	
Environmental Improvement Revenue Bonds (Variable Interest Rates)												
11 2.13% 1991**	17-Dec-91	1-Dec-20	\$42,585,000	\$42,585,000		\$296,590	\$42,288,410	\$907,061		\$16,088	\$923,148	
12 2.13% 1992**	3-Dec-92	1-Dec-22	47,500,000	47,500,000		325,355	47,174,645	1,011,750		15,921	1,027,671	
13 2.46% 1998 A, B, & C**	1-Sep-98	1-Sep-33	160,000,000	160,000,000		1,497,635	158,502,365	3,943,800		48,010	3,991,810	
14 2.43% 2000 A, B, C **	9-Mar-00	1-Mar-35	186,500,000	186,500,000		1,385,530	185,114,470	4,537,795		42,383	4,580,178	
			\$436,585,000	\$436,585,000		\$3,505,110	\$433,079,890	\$10,400,406		\$122,402	\$10,522,807	
Interest Debentures												
16 7.69% Interest Debentures	16-Dec-96	15-Dec-36	\$65,500,000	\$65,500,000	\$494,371	\$100,613	\$64,905,016	\$5,036,950	\$14,336	\$2,918	\$5,054,203	
			\$65,500,000	\$65,500,000	\$494,371	\$100,613	\$64,905,016	\$5,036,950	\$14,336	\$2,918	\$5,054,203	

Debt Issue Type, Coupon Rate (A)	Date Issued (B)	Maturity Date (C)	Original Principal Amount (D)	Face Amount Outstanding (E)	Unamortized		Carrying Value (H)	Coupon Interest Expense (I)	Amortization		Total Expense (L)
					Debt Discount or (Premium) (F)	Debt Expense (G)			of Debt Discount or (Premium) (J)	Amortization of Debt Expense (K)	
Retired Issues											
17	Series 8.25%	1-Jul-02	15-Oct-22				\$5,260,374	(\$5,260,374)		\$259,044	\$259,044
18	Series 8.75%	1-Sep-02	1-Dec-21				6,547,747	(6,547,747)		336,894	336,894
19	7% FMB	1-Jun-93	1-Apr-08				\$209,924	(209,924)		\$36,452	\$36,452
20	7.375% FMB	1-Jun-93	1-Apr-08				185,153	(185,153)		32,151	32,151
21	7% FMB	1-Nov-92	1-Aug-11				349,694	(349,694)		38,457	38,457
22	9% FMB	1-Mar-92	1-Jun-03				134,202	(134,202)		145,785	145,785
23	7.875% FMB	1-Mar-93	1-Jul-04				185,736	(185,736)		92,614	92,614
24	7.625% FMB	1-Jun-93	1-Apr-08				379,542	(379,542)		65,905	65,905
25	8.125% FMB	1-Mar-93	1-Jul-04				251,774	(251,774)		125,543	125,543
26	8.375% FMB	1-Mar-93	1-Jul-04				382,160	(382,160)		190,558	190,558
27	10.5% FMB	1-Apr-92	1-Aug-11				167,312	(167,312)		18,400	18,400
28	8.875% FMB	1-Nov-92	1-Aug-11				1,416,595	(1,416,595)		155,787	155,787
29	5.8% FMB	1-Mar-92	1-Dec-20				160,526	(160,526)		8,707	8,707
30	8.625% FMB	1-Jan-93	1-Feb-14				1,425,628	(1,425,628)		122,899	122,899
31	9.35% FMB	1-Jan-92	1-Dec-21				1,546,229	(1,546,229)		79,556	79,556
32	9.95% FMB	1-Dec-91	1-Nov-21				1,288,884	(1,288,884)		66,597	66,597
33	9.25%-9.625% FMB	1-Aug-90	1-Apr-20				1,833,778	(1,833,778)		103,212	103,212
34	9.375% FMB	1-Jan-93	1-Feb-14				3,790,332	(3,790,332)		326,753	326,753
35	8.875% FMB	1-Mar-92	1-Dec-02				111,117	(111,117)		263,362	263,362
36	7.40% FMB	1-Mar-00	1-Mar-35				2,441,313	(2,441,313)		74,680	74,680
37	10.75% FMB	1-Dec-91	1-Nov-21				19,807	(19,807)		1,023	1,023
38	8% FMB	1-Nov-92	1-Aug-11				50,271	(50,271)		5,528	5,528
39	9.375% FMB	1-Jan-92	1-Nov-21				151,236	(151,236)		7,814	7,814
40	7.75% FMB	1-Jun-93	1-Apr-08				72,004	(72,004)		12,503	12,503
41	10% FMB	1-Dec-91	1-Nov-21				225,106	(225,106)		11,631	11,631
42	9.375% FMB	1-Jan-92	1-Nov-21				44,742	(44,742)		2,312	2,312
43	8.5% FMB	1-Mar-92	1-Jun-03				10,786	(10,786)		11,717	11,717
44	8.25% FMB	1-Nov-92	1-Aug-11				56,211	(56,211)		6,182	6,182
45	7.95% FMB	1-Nov-92	1-Aug-11				33,440	(33,440)		3,678	3,678

Debt Issue Type, Coupon Rate (A)	Date Issued (B)	Maturity Date (C)	Original Principal Amount (D)	Face Amount Outstanding (E)	Unamortized		Carrying Value (H)	Coupon Interest Expense (I)	Amortization		Total Expense (L)	
					Debt Discount or (Premium) (F)	Debt Expense (G)			of Debt Discount or (Premium) (J)	of Debt Expense (K)		
Retired Issues (continued)												
46	9.25% FMB	1-Jan-92	1-Nov-21				74,802	(74,802)			3,865	3,865
47	1974 PCB	1-Mar-92	1-Dec-20				64,610	(64,610)			3,505	3,505
48	1975 PCB	1-Nov-77	1-Oct-05				599,877	(599,877)			184,151	184,151
49	1981 PCB	1-Jun-85	1-May-15				486,902	(486,902)			37,909	37,909
50	1982 PCB	1-Jun-85	1-May-15				40,614	(40,614)			3,162	3,162
51	1984 A & B PCB	1-Dec-98	1-Aug-33				1,961,454	(1,961,454)			63,050	63,050
52	1984 C PCB	1-Sep-93	1-Nov-22				439,898	(439,898)			21,613	21,613
53	1985 A & B PCB	1-Mar-00	1-Mar-35				962,490	(962,490)			29,443	29,443
							\$33,362,271	(\$33,362,271)			\$2,952,444	\$2,952,444
					\$1,684,085,000	\$5,009,766	\$43,375,955	\$1,635,699,280	\$93,034,106	\$366,494	\$3,695,625	\$97,096,224
											5.94%	

*Environmental Improvement Series backed by First Mortgage Bonds.

**Company response to Staff data request MGM 4.01.

AmerenUE

Pre-tax Interest Coverage Ratios

Capital Component	Weight	Cost ¹	Weighted Cost	Revenue Conversion Factor	Pre-Tax Cost of Capital
<u>Actual Capital Structure</u>					
Short-term Debt	1.20%	1.39%	0.02%	1.00	0.02%
Long-term Debt	36.69%	5.94%	2.18%	1.00	2.18%
Preferred Stock	2.57%	5.19%	0.13%	1.67	0.22%
Common Equity	59.55%	10.37%	6.18%	1.67	10.33%
Total	100.0%		8.51%		5.80x ²
<u>Staff's Proposed Capital Structure</u>					
Short-term Debt	1.4%	1.39%	0.02%	1.00	0.02%
Long-term Debt	43.6%	5.94%	2.59%	1.00	2.59%
Preferred Stock	2.3%	5.19%	0.12%	1.67	0.20%
Common Equity	52.7%	10.37%	5.46%	1.67	9.13%
Total	100.0%		8.19%		4.57x

¹ These are Staff capital component cost recommendations. AmerenUE's capital component cost proposals would produce still higher pre-tax interest coverage ratios.

² The pre-tax interest coverage ratio equals the total pre-tax cost of capital for all components divided by the sum of the pre-tax cost of capital for short-term debt and long-term debt.