Respondents' Exhibit 13.0

ILLINOIS COMMERCE COMMISSION

DOCKET NOS. 06-0070, 06-0071 and 06-0072

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 and
ILLINOIS POWER COMPANY, d/b/a AMERENIP

May 26, 2006

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Q. Please state your name and business address.

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

Q. Are you the same Kathleen C. McShane who previously submitted testimony in these proceedings?

A. Yes.

Q. What is the purpose of your rebuttal testimony?

A. I will address the principal concerns that I have with the return on equity testimony of (1) Ms. Janice Freetly (Illinois Commerce Commission Staff); (2) Mr. Michael Gorman (Illinois Industrial Energy Consumers); (3) Richard Cuthbert (Cities of Champaign and Urbana, Illinois); and (4) Mr. Edward Bodmer (Citizens Utility Board) as well as their critiques of my equity return analysis. My evidence is structured as follows:

First, I will address the direct testimony of each of the witnesses individually. Second, I will address the witnesses' critiques of my evidence by subject matter.

Rebuttal to Staff

Q. Please summarize briefly Staff's return testimony in this case.

A. Staff's witness, Ms. Freetly, applies both the Discounted Cash Flow (DCF) test and the Capital Asset Pricing Model to a sample of eleven electric and/or gas distribution utilities. Ms. Freetly's DCF result is 9.11% and her CAPM result is 11.57%. Using the results of both tests, she concludes that the cost of equity for the samples is 10.34%. She then adjusts the results downward by 30, 40, and 29 basis points for CILCO, CIPS and IP respectively to reflect her view that acceptance of her recommendations would produce financial metrics for each of the Ameren utilities sufficient to result in higher debt ratings than maintained by her proxy sample.

Q. Do you have any concerns with Ms. Freetly's DCF test?

A. Yes. Ms. Freetly has relied on Zack's consensus of analysts' forecast of earnings growth rates plus a recent dividend yield to arrive at an estimate of the cost of equity for her sample. The earnings growth rates average 4.5%, which, when added to the dividend yield, as adjusted for quarterly compounding, result in a return on equity of 9.11%. The growth rate used in the constant growth DCF model is intended to represent the expected rate of growth into perpetuity. The growth rates forecast by analysts typically are for a three- to five-year period. At the present time, these growth rates are relatively low, as demonstrated on my Exhibit 3.0, Schedule 12. Schedule 12 shows that the average forecast rate of growth by analysts for a sample of relatively low risk utilities has averaged 5.5% since 1993, and 5.4% when 10-year Treasury yields were at levels of

5.5% and below. (Ten-year Treasury yields are currently 5.1%.) A growth rate of 5.5%, closer to the expected long-term growth in the economy, is a more reasonable estimate of the expected growth rate in perpetuity. It would be a reasonable inference for investors to view the long-run growth potential of utilities as a mirror of the growth in the economy of their service areas.

Q. Ms. Freetly has criticized your use of the expected long-term growth in the economy as an input to your two-stage DCF model, claiming that utilities are low growth companies, and should not be expected to achieve growth rates as high as growth in the economy. Do you have any comments?

A. Yes. This comment is at odds with prior testimony filed by Ms. Freetly. As recently as early 2002, in Docket 01-0696 for MidAmerican, Ms. Freetly used estimated long-term growth for a sample of 12 gas distributors of 7.2%, which is well above the long-term growth in the economy. At the time, the forecast of long-term growth in the economy was approximately 5.5%.[1] There have been, to my knowledge, no fundamental changes in the utility industries that would explain why, in 2002, utilities could grow faster than the economy as a whole in the long run, but in 2006, they cannot.

Q. What other indications do you have that the exclusive use of the three- to five-year growth rates understates the growth rate expected into perpetuity?

A. A comparison of the resulting DCF cost of 9.11% to the recent yield on Moody's long-term Baa rated bonds of 6.6% suggests that investors only require a risk premium of 2.5 percentage points to invest in utility common shares rather than the bonds of utilities.

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

That differential is approximately 1.1 percentage points lower than the average spread between allowed returns for electric and gas utilities and Baa rated utility bond yields over the past 10 years (See Exhibit 13.0, Schedule 1), and close to 2.0 percentage points lower than the spread during the past three years (when utility bond yields were closer to recent levels).

Q. Why isn't the answer a lower cost of capital due to the dividend tax reduction, as suggested by Cities of Champaign and Urbana, Illinois' witness Mr. Cuthbert (p. 17)?

A. Any reduction in the cost of equity due to changes in the tax law should be reflected in the dividend yield component of the DCF cost, resulting in a lower value for the dividend yield/Treasury yield ratio, as there was no change in the taxation of interest. Exhibit 13.0, Schedule 2 calculates the dividend yield/10-year Treasury yield ratios quarterly from the beginning of 1993 to the end of 2005. The dividend tax reduction was passed into legislation in May 2003. Schedule 2 shows that, while the dividend yield/Treasury yield ratio declined temporarily when the dividend tax reduction was passed, the recent ratios (2005) have been similar to the pre-dividend tax reduction levels. This comparison indicates that there has been no material change in the cost of equity relative to interest rates.

Q. What is the impact on the DCF cost of equity resulting from using a 4.5% growth rate rather than an expected long-term growth rate of 5.5%, which more closely parallels not only expected long-term economic growth, but the typical forecast growth rate during periods characterized by similar inflation and interest rates?

A. The DCF results would be understated by approximately 75 basis points due to the use of the lower growth rate.

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

A. Ms. Freetly estimates the cost of equity through application of the CAPM using a risk free rate of 4.97%, equal to the 10-year Treasury yield as of April 4, 2006, a market return of 13.66%, and a beta of 0.76.

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

A. My key concern is with her beta. Ms. Freetly averages betas provided by *Value Line* with regression betas that she calculates herself. Her regression beta is 0.68; the corresponding *Value Line* beta is 0.83. The *Value Line* betas are calculated using weekly data; the regression betas are calculated using monthly data. In Docket 00-0302, Staff explained the reason that they had only used *Value Line* betas. At page 30 of Staff testimony for CIPS/UE, Staff explained

> "Unusually high volatility affected a small number of the observations used to calculate beta with the methodology Staff traditionally uses. Although relatively few of the observations were irregular, they were enough to produce an unreasonably low beta estimate. Therefore, I considered using Value Line adjusted beta estimates. A graphical analysis of betas calculated using the Value Line procedure indicated that the Value Line beta estimates are not adversely affected by outlying observations. Thus, I used the Value Line adjusted beta estimates".

Since the regression betas include 60 observations, and the *Value Line* betas include 260 observations, outlying observations will have a larger effect on the calculated monthly betas than on the weekly betas. Outliers will strongly influence the slope of the

regression line (beta). Therefore, *Value Line* betas, which include five times the number of observations, are to be preferred.[2]

Q. What is the impact of using only the *Value Line* betas in Ms. Freetly's testimony?

A. Using only the *Value Line* beta of 0.83 increases her CAPM result by 61 basis points, from 11.57% to 12.18%.

Q. As you noted earlier, Ms. Freetly makes reductions to her cost of equity estimate for each of the Ameren utilities. Do you agree with her adjustment?

A. No, for two reasons. First, utility ratings are based on a host of factors, not solely on the two financial metrics that Ms. Freetly cites. Second, Ms. Freetly's downward adjustment makes the unwarranted assumption that the calculated cost of equity for the sample is consistent with the relative risk. In other words, the calculated cost of equity for a riskier sample will be higher than that of a less risky sample. The testimony of Mr. Gorman makes clear that that is not the case. Mr. Gorman uses two proxy samples to estimate the cost of equity, an electric utility sample and a gas utility sample. Table 1

[2] A review of past Staff testimony shows that the regression betas have been consistently lower than the *Value Line* betas. For example,

Docket Number/Company	***Value Line* Beta**	**Regression Beta**
04-0475 Illinois Power	0.75 (gas) 0.79 (utility)	0.58 (gas) 0.72 (utility
02-07998 93-0008 03-0009 AmerenCIPS & UE	0.69	0.50
04-0779 Nicor Gas	0.76	0.56

below compares the risk statistics and calculated costs of equity for each of the two samples.

Table 1

Gorman Sample	Average Ratings		S&P Business Profile Score	*Value Line*		DCF Cost
	S&P	Moody's		Common Equity Ratios	Betas	
Electric Sample Average	A-	A3	5	51	0.78	9.1%
Gas Sample Average	A-	A3	3	51	0.77	9.4%

A comparison of the two sample shows that, based on all of the risk factors, Mr. Gorman's electric utility sample is at least as risky, if not more risky, than his gas distribution sample, yet the DCF cost of equity is lower for the electric utility sample than for the gas distribution sample. This comparison demonstrates that the estimation of the cost of equity is not a precise mathematical calculation, and that any estimate is measured with error. Ms. Freetly's downward adjustment to her test results that may already underestimate the equity return requirement, as indicated by the contradictory relationship between risk and return in Mr. Gorman's results, is not justifiable.

<u>Rebuttal to Mr. Gorman</u>

Q. Please summarize Mr. Gorman's equity return testimony.

A. Mr. Gorman uses three tests to estimate the cost of equity: the constant growth DCF model, an equity risk premium test and the CAPM. His results for the three tests are, respectively, 9.3%, 10.1% and 10.2%. His recommended return for the three Ameren utilities is 10.0%.

Q. Do you have any comments with respect to his DCF test?

A. Mr. Gorman's DCF test estimates the cost of equity using recent dividend yields plus analysts' three to five year forecasts of earnings growth. I have the same concerns as with Ms. Freetly's testimony; that is, the premise that these estimates equate, at the present time, to the rates of growth that investors expect into perpetuity. I note also that Mr. Gorman compares the consensus forecasts of three to five year growth rates for his samples (4.3% to 4.8%) to the long-term growth in the economy estimated at 5.2%, but does not take the higher long-term growth potential into account. Similar to Ms. Freetly, Mr. Gorman has performed DCF analyses in recent years that have relied on significantly higher estimates of utilities' long-term growth rates. To illustrate, in Docket 01-0432 September 2001 for Illinois Power, Mr. Gorman used a growth rate of 6.8% for a sample of electric utilities, as compared to a 4.3% growth rate for electric utilities in his current testimony. There is no fundamental reason why the expected long-term growth for electric utilities should have declined by close to 2.5 percentage points since 2001.

Q. Please describe Mr. Gorman's equity risk premium test.

A. Mr. Gorman estimates the equity risk premium by averaging the results of two approaches. In the first, the differences between the allowed rates of return on equity and the yield on 20-year government bonds for the period 1986-2005 are determined. Using a range of differences of 4.4% to 5.9% (in which 14 of his 20 observations fall), he adds his forecast 20-year Treasury bond yield of 5.1% to arrive at a return on equity in the range of 9.5-11.0% (or a midpoint of 10.3%). My main concern with this approach – other than its circularity – is the fact that it averages the risk-premium over years when the risk of Treasury bonds was higher than it has been recently. From 1986-1995, the rate of inflation averaged 3.5%, with a maximum rate of 5.4%. From 1996 to 2005,

inflation has been contained within a range of 1.5 to 3.5%, averaging 2.5%, equivalent to the long-term inflation forecast. The combination of higher and more volatile rates of inflation raises the risk of investing in bonds (relative to equities) and squeezes the equity risk premium. If Mr. Gorman's analysis had been limited to the past decade (1996-2005), when the Treasury yield averaged 5.6%, as compared to 7.9% over the 1986-1995 period, the indicated risk premium would have been 5.5%, rather than 5.0%. Adding the recent ten-year average risk premium of 5.5% to Mr. Gorman's forecast 5.1% 20-year Treasury yield would produce a return on equity of 10.6%.

Mr. Gorman's second approach adds the utility risk premium over utility bonds of 3.0% to 4.4% to the March 3, 2006 Baa long-term utility bond yield of 6.1% producing a cost of equity in the range of 9.1% to 10.5%, with a mid-point of 9.8%. Again, if the analysis had been limited to the past decade, the risk premium would have been higher, at 4.0%. When a risk premium of 4% is added to the May 4, 2006 Baa utility bond yield of 6.61%, this indicated the return on equity is, similar to the first approach, 10.6%.

Q. Do you have any comments regarding Mr. Gorman's CAPM?

A. Yes. I disagree with his estimates of the market risk premium. Mr. Gorman estimates the market risk premium two ways. For his first approach, he adds the average historic real return on equities to the long-term forecast of inflation to arrive at an estimate of the future market return of 11.7%. From that estimated market return, he subtracts the forecast yield on 20-year Treasuries to arrive at an estimated market risk premium of 6.6%. His second approach takes the nominal historic return on equities from which he subtracts the historic achieved total return on government bonds, arriving at a market risk premium of 6.5%. I will deal with each of these approaches in turn.

With respect to the first approach, adding the real return achieved on the market to expected inflation would be appropriate if there were any evidence that the expected return on the market moves in tandem with the rate of inflation. There is no evidence, based on the historic market results, that it does. There has been no correlation between inflation and market returns historically. In the absence of any observable relationship between inflation and real returns, or any indication that there is any secular upward or downward trend in the nominal market returns (which there is not), the nominal achieved market return is the better estimate of the forward looking market return. The nominal market return, as utilized in Mr. Gorman's second approach, is 12.3%, leading to a market risk premium over his forecast 20-year Treasury yield of 7.2%.

Mr. Gorman's second approach to estimating the market risk premium, as noted above, uses the nominal return on market returns less the total return on bonds. Ibbotson and Associates, *Stocks, Bonds, Bills and Inflation, Valuation Edition, 2006 Yearbook*, pages 75-76, explain why the income return, not the total return, on bonds should be used to estimate the market risk premium.

> "Another point to keep in mind when calculating the equity risk premium is that the income return on the appropriate-horizon Treasury security, rather than the total return, is used in the calculation. The total return is comprised of three return components: the income return, the capital appreciation return, and the reinvestment return. The income return is defined as the portion of the total return that results from a periodic cash flow or, in this case, the bond coupon payment. The capital appreciation return results from the price change of a bond over a specific period. Bond prices generally change in reaction to unexpected fluctuations in yields. Reinvestment return is the return on a given month's investment income when reinvested into the same asset class in the subsequent months of the year. The income return is thus used in the estimation of the equity risk premium because it represents the truly riskless portion of the return."

Using the income return of 5.2% instead of the total return on bonds of 5.8% produces a virtually identical risk premium to the corrected first approach, since the average income return on bonds over the historical period used is within 10 basis points of Mr. Gorman's forecast 20-year bond yield of 5.1%.

With these changes, Mr. Gorman's CAPM results for his two samples would be 10.7% and 10.6% for the electric and gas samples respectively, an increase to his results of approximately 45 basis points, on average, for the two samples.

Q. Do you have any other comments regarding Mr. Gorman's direct testimony?

A. Yes, I have one comment with respect to his testimony regarding the capital structure ratios of AmerenIP. Mr. Gorman claims that, at 54.9%, AmerenIP's common equity ratio is too high.[3] A review of his Schedule MPG-3 indicates that a 54.9% common equity ratio is well within the range of common equity ratios of Mr. Gorman's proxy companies. As Schedule MPG-3 indicates, for the 21 utilities in his two samples, eight have *Value Line* equity ratios of 53% or higher.

[3] The common equity ratio of AmerenIP, as updated to year-end 2005, in the rebuttal testimony of Ameren witness Mr. Michael O'Bryan, is 53.1%.

<u>Rebuttal to Mr. Cuthbert</u>

Q. How does Mr. Cuthbert arrive at this recommended return on equity of 9.46% for AmerenIP?

A. Mr. Cuthbert performs both a constant growth and a two-stage growth DCF test for Ameren Corp., and for a sample of electric utilities, the CAPM for Ameren Corp. and a sample of electric utilities, and an equity risk premium test. He gives two-thirds weight to his DCF results and one-third weight to his equity risk premium and CAPM results. I will discuss each of his tests in turn.

Q. Describe briefly how Mr. Cuthbert conducts his DCF test and his results.

A. Mr. Cuthbert conducts both a constant growth and a two-stage DCF test, which he applies to Ameren alone and to a sample of proxy utilities. He concludes that the DCF cost of equity for Ameren is in the range of 7.42% to 9.83%, with an average of 8.73%. The corresponding results for the sample of electric utilities are a range of 7.93% to 9.43% with an average of 8.77%.

Q. Do you think it is appropriate to apply the DCF test to a sample of only one company, as Mr. Cuthbert did for Ameren Corp?

A. No. As I discussed in my direct testimony, it is an exercise fraught with potential measurement error. It is particularly problematic in the case of a regulated company, since the exercise becomes entirely circular (See Exhibit 3.0, lines 353-371).[4]

Q. What comments do you have with respect to the results of the DCF test as applied to his proxy sample of utilities?

[4] All line numbers from Exhibit 3.0 refer to the AmerenCILCO, December 12, 2005 testimony.

A. Mr. Cuthbert has selected a sample of utilities that is at least as risky as the samples selected by Ms. Freetly and Mr. Gorman based on debt ratings, business profile scores and betas, yet his DCF results are lower. In part, the lower estimates are the result of lower dividend yields for his sample. Given two samples of similar risk, it is reasonable to expect that lower dividend yields would be offset by higher growth expectations, so that the costs of equity for the two samples would be equal. The fact that this is not the case simply highlights the high potential for incongruity between measurements of risk and return. This can be particularly problematic when the constant growth DCF estimates are based on relatively short term growth expectations. The confidence that can be placed in the assumption that expected short term growth – three to five year growth – is equivalent to the long-term rate of growth is reduced when the industry in question is in a state of flux, as is the case with the electric utility industry.

Q. How does Mr. Cuthbert perform his equity risk premium test?

A. He subtracts the yields on 10-year Treasury notes, Aaa rated corporate bonds and Baa corporate bonds from the annual earned return for the *Value Line* composite of electric utilities for each year 1996 to 2005 and averages the differences between the returns and the bond yields to arrive at three different equity risk premiums. He then adds each of his three risk premiums to the corresponding three and twelve-month average (ending March 31, 2006) bond yields to arrive at a return on equity in the range of 9.5% to 10.3%.

Q. What changes do you believe are required to his application of the test to make the results reasonable?

A. In principle, I believe the test suffers from considerable circularity. Nevertheless, if it is to be used as an alternative perspective on a reasonable return on equity, the following changes need to be made. First, the analysis measures the risk premium over the past five years and over the past 10 years. Because of the relatively short period of time covered by the analysis, each of the reported annual returns has a material impact on the size of the risk premiums. Each annual return on equity for the *Value Line* composite is calculated by summing the financial results (income and common equity) for all of the companies that were covered by *Value Line* at the time the annual data became available. Thus the results can be significantly impacted by the experience of a single, or a few, electric utilities. In 2000, for example, the reported return for the *Value Line* composite was 7.2%, while the median return for the individual *Value Line* electric utilities was 11.8%. The composite return in 2000 includes the losses of two California utilities, Pacific Gas and Electric and Edison International. These two companies alone lost slightly over $5 billion in 2000. Thus, the composite does not necessarily present an accurate picture of the industry's performance. If the median return for all of the *Value Line* utilities for each year had been used, rather than the composite return, the average 1996-2005 difference between the earned returns for the industry and the corresponding 10-year Treasury yields increases by 70 basis points, from 5.44% to 6.15%. Using the five-year period 2000-2005, it increases from 6.3% to 6.5%. Similar recalculations were made for the other two series of bond yields used by Mr. Cuthbert (Aaa- rated and Baa-rated corporate bonds; see Exhibit 13.0, Schedule 3 for the revised calculations of the differences).

Second, Mr. Cuthbert adds his risk premiums to historical averages of bond yields that are materially lower than current yields. The table below compares the yields he used for his analysis to the yields prevailing at May 10, 2006.

Table 2

	Mr. Cuthbert		**Yield at 5/10/2006**
	12-months ending 3/31/06	**3-months ending 3/31/06**	
10-year Treasuries	4.36%	4.57%	5.13%
Aaa Corporates	5.25%	5.39%	5.95%
Baa Corporates	6.15%	6.31%	6.74%

Sources: Exhibit RWC-5, Federal Reserve.

Using current bond yields and the revised risk premiums results in a return on equity of 10.9%, rather than the 9.9% calculated by Mr. Cuthbert, as shown in the table below.

Table 3

	Five Year Average	**Ten Year Average**
Value Line Median Return on Equity	11.74%	11.34%
Rick Premiums Over:		
10-Year Treasury Notes	6.49%	6.15%
Aaa Corporate Bonds	4.91%	4.75%
Baa Corporate Bonds	3.94%	3.90%
Current Yields:		
10-Year Treasury Notes	5.13%	5.13%
Aaa Corporate Bonds	5.95%	5.95%
Baa Corporate Bonds	6.74%	6.74%
Estimated Equity Return:		
10-Year Treasury Notes	11.62%	11.28%
Aaa Corporate Bonds	10.86%	10.70%
Baa Corporate Bonds	10.68%	10.64%

Average Cost	**11.05%**	**10.87%**

Source: Exhibit 13.0, Schedule 3.

Q. Please address Mr. Cuthbert's CAPM.

A. Similar to Mr. Gorman, in conducting his CAPM, Mr. Cuthbert used total returns on bonds when estimating the forward looking risk premium from historic data. As a result, his market risk premium calculated by reference to intermediate term government bonds is understated by 60 basis points, and his market risk premium calculated by reference to 20-year government bonds is understated by 50 basis points. Current yields on the three-month Treasury bills, 5-year Treasury bonds, and 20-year Treasury bonds are 4.9%, 5.0%, and 5.3% respectively, compared to the 6 month averages of 4.1%, 4.5% and 4.8% he used to estimate the CAPM cost of equity.

The revised CAPM results, as set out on Exhibit 13.0, Schedule 4, indicate a CAPM cost of equity in the range of 11.0-11.75%, compared to Mr. Cuthbert's calculations of 10.0-11.0% for his proxy sample.

Q. Do you have any comments regarding his CAPM applied solely to Ameren?

A. The same measurement error problem exists in the application of the CAPM as in the DCF test. The test should only be applied to samples of comparable companies to avoid the potential for measurement error.

Q. Mr. Cuthbert claims to have done a test of the reasonableness of his proposed 9.46% ROE. Are his conclusions accurate?

A. No. Mr. Cuthbert states that his recommended 9.46% return on equity is reasonable since it is 407 basis points above the interest rate on Aaa-rated bonds and 315 basis points above the interest rate on Baa-rated bonds. These differences, he concludes, are consistent with average interest rate differentials between these bonds and the earned returns on equity. However, this comparison reflects lower interest rates than are currently prevailing. At the current yields of 5.95% and 6.71% for Aaa-rated and Baa-rated corporate bonds, respectively, the differentials with his recommended 9.46% return on equity would be only 350 and 275 basis points respectively. Moreover, as discussed above, the average differentials between the typical earned return for electric utilities (rather than the *Value Line* composite) and Aaa-rated and Baa-rated bonds were closer to 490 and 390 basis points, respectively. Thus, Mr. Cuthbert's proposed 9.46% is about 115 to 140 basis points <u>lower</u> than the average differentials between earned returns and interest rates. By Mr. Cuthbert's own standard of reasonableness, his recommendation falls short.

Q. Mr. Cuthbert gives two-thirds weight to the DCF test and one-third weight to the equity risk premium test, because, in his view, the DCF test is more reliable than the equity risk premium test. Do you agree with his assessment?

A. No, there is nothing inherently more reliable about the DCF test conceptually. It requires making an inference of what investors expect growth in dividends to be over the very long-term, with that unobservable portion of the cost of equity being over 50% of the total cost. Further, over time, the results of applying the DCF test are more volatile than long-term interest rates. The DCF estimates for individual companies, as well as entire samples, can exhibit variations in cost that are inconsistent with their relative risk.

Moreover, as discussed further below, the DCF test results understate investors' expected returns on equity when the price of the shares is above book value.

<u>Rebuttal to Mr. Bodmer</u>

Q. What is your reaction to the recommended return on equity of Mr. Bodmer which he states "should be no greater than 8.0%"?

A. His recommended return is inadequate on its face, and clearly does not meet the criteria for a fair return. A return of "no greater than 8.0%" would not be sufficient to maintain the financial integrity of the Ameren utilities; it would not allow the utilities to attract capital as required on reasonable terms, and it certainly would not meet the comparable returns standard.

Q. Would you provide some perspective on the level of Mr. Bodmer's recommended return?

A. A maximum return of 8.0% is 150 basis points lower than the next closest recommendation in this proceeding (Mr. Cuthbert's recommendation of 9.46% for AmerenIP), 200 basis points lower than the average of Ms. Freetly and Mr. Gorman's recommendations and no less than 200 basis points lower than the average proposed return of all four of the other cost of capital witnesses in this proceeding. It represents a return of just 1.6 percentage points above current yields on long-term A-rated utility bonds and 1.4 percentage points above current yields on long-term Baa-rated utility bonds.

More telling, however, is a comparison between Mr. Bodmer's recommended return and the returns that have been allowed recently by other regulators. A review of all decisions issued by state regulators for both electric and gas utilities in the past two

years (from second quarter 2003 to first quarter 2006) shows that the average allowed returns for electric and gas, respectively, have been 10.6% and 10.5%. Over that two year period, yields on long-term A-rated and Baa-rated utility bonds averaged 5.9% and 6.1% respectively, below the current yields of 6.4% and 6.6%. On average, the difference between allowed returns and utility bond yields in the past two years has been 4.65% above A-rated utility bond yields and 4.45% above Baa-rated utility bond yields. A similar spread today would produce an allowed return of 11.0%. No state regulatory decision within the past two years has approved a return on equity lower than 9.7%, even for the utilities in Mr. Bodmer's small proxy sample. Mr. Bodmer's maximum return recommendation of 8.0% is close to 175 basis points lower than the lowest return approved by all state regulators within the last two years.

Q. Of what relevance is the comparison of Mr. Bodmer's recommendation with the returns that other regulators have allowed?

A. The returns that have been allowed by regulators can be interpreted as a composite of the analyses of the return requirements presented by a broad range of experts. While this Commission is not bound by what other regulators do, what other regulators have done in other jurisdictions is relevant to the assessment of the reasonableness of Mr. Bodmer's recommendations. The comparison of Mr. Bodmer's recommendation to the returns allowed by other regulators demonstrates how far he is outside of the mainstream. If a maximum return of 8.0% is fair and reasonable, then regulators as a group have been very wrong in their interpretation of the evidence that has been presented to them.

Q. What would be the implications of the Commission's acceptance of Mr. Bodmer's recommendation?

A. Acceptance of his recommendation would be a signal to the investment community that the ability to attract capital on reasonable terms and conditions, the maintenance of financial integrity and the opportunity to earn a return commensurate with those of comparable risk firms are of little or no relevance.

The cost of capital is a real cost to the utility. The return on capital represents the compensation investors require to make available the funds necessary to build, grow and maintain the infrastructure necessary to deliver services essential to the economic well-being of a region.

A just and reasonable return on the capital provided by investors not only fairly compensates the investors who have put up, and continue to commit, the funds necessary to deliver service, but benefits all stakeholders, especially ratepayers. A fair and reasonable return on the capital invested in an electric utility provides the basis for attraction of capital for which investors have alternative investment opportunities. Fair compensation on the capital committed to the utility provides the utility with the financial means to pursue technological innovations and build the infrastructure that is required to support long-term growth in the underlying economy.

An inadequate return, on the other hand, undermines the ability of a utility to compete for investment capital. Moreover, inadequate returns act as a disincentive to expansion within the service area, may potentially degrade the quality of service or deprive existing customers from the benefit of lower unit costs which might be achieved from growth. In short, if the utility is not provided the opportunity to earn a fair and

reasonable return, it may be prevented from making the requisite level of investments in the existing infrastructure in order to reliably provide utility services for its customers. Acceptance of Mr. Bodmer's recommendation would signal to the investment community, both debt and equity, that they should direct their future capital investments elsewhere.

Response to Critiques by Staff and Intervenors

Discounted Cash Flow Test

Q. Ms. Freetly and Mr. Gorman criticize your use of *Value Line* earnings and cash flow growth rates in assessing investor expectations because they claim those growth rates are not sustainable in the long run. How do you respond?

A. In deriving a constant growth estimate for the DCF cost of equity, the objective is to capture, in a single number, investors' expectations of long-term growth. That expectation is likely to reflect a composite of various measures and forecasts of growth, some of which may be higher than growth sustainable in the long-term and some lower. A single expected growth rate into perpetuity must, by its very nature, take into account shorter and longer term growth expectations. What needs to be evaluated is the reasonableness of the average (or composite) growth rate underlying my constant growth DCF model as a representation of long-term expectations. The average, or composite, of the different growth rates for my sample of utilities is approximately 5.6%. A growth rate of 5.6% is not only in line with long-term economic growth, it is also close to the average of the consensus five-year earnings growth forecasts made for the same companies in a similar interest rate environment (See Exhibit 3.0, Schedule 12).

Q. Please respond to Ms. Freetly's claim that you have not demonstrated that equating long-term growth for utilities to long-term economic growth is a reasonable assumption.

A. The assumption that, in the longer run, investors would expect utility growth to equate to economic growth recognizes the dual facts that (1) utilities are mature industries, and (2) the role of utilities is to build and maintain basic infrastructure that underpins economic growth. In terms of the industry life cycle, utilities are neither part of a growth industry (whose growth would be expected to outpace the rest of the economy), nor an industry in decline, as was suggested by Mr. Bodmer. The very nature of a mature industry is one whose growth tracks the average rate of growth in the economy. Growth rates in these industries will vary from year to year and over the business cycle, but will tend to deviate around the long-term growth in the economy.

While Ms. Freetly suggests that the utilities should have expected long-term growth rates lower than the average, it is not at all clear why this should be the case. She suggests that an average growth company should have expected growth equal to the expected growth in the economy (and that utilities are below average growth companies). However, her own evidence indicates that the <u>typical</u> traded firm is expected to experience above average growth at this point in its life cycle. Ms. Freetly's estimate of the expected market return of 13.66%, given a current dividend yield of approximately 1.9%, implies expected growth for the overall market is considerably in excess of the underlying growth potential for the overall economy (approximately 11.75%).

Q. Mr. Bodmer believes you have overstated the level of GDP growth that you rely on for estimating the long-term growth expectation, citing an article which

mentions an economic growth rate of 3.5% as compared to the 5.5% you used. Can you explain the difference?

A. Yes, the 3.5% referred to by Mr. Bodmer is a real rate of growth (after inflation) and the 5.5% is a nominal rate of growth. The cost of equity being estimated is a nominal cost, which requires a nominal rate of growth, not a real rate.

Q. Mr. Cuthbert takes issue with your use of a natural gas sample as a proxy for Ameren utilities' delivery tariff operations, believing a gas utility sample is of higher risk than an electric utility sample. Is he correct?

A. No. A comparison of the risk measures of his sample and my sample demonstrate clearly that that is not the case. My sample of gas utilities is demonstrably less risky than his sample of electric utilities, as shown in the table below.

Table 4

	McShane Sample (medians)	**Cuthbert Sample (medians)**
S&P Business Profile Score	3	5
S&P Debt Rating	A-	BBB
Moody's Debt Rating	A3	Baa2
Value Line Safety Rank	2	2
Value Line Beta	.75	.80

Mr. Cuthbert simply has no basis for his purported concern with my proxy sample.

<u>Risk Premium Tests</u>

Q. Please address Ms. Freetly's criticism of your use of historic data to estimate the risk premium, in particular historic risk utility risk premiums.

A. If there were secular trends in the historic risk premium data that would make them unreliable as one estimate of the future expected risk premium, then Ms. Freetly would have a point. However, that is not the case. I have analyzed the historic trends in the utility market returns. The various sub-period average achieved returns reveal no upward or downward trends that would preclude using historic market returns as a reasonable proxy for investor's future expected returns. (See Exhibit 13.0, Schedule 5)

Q. Mr. Gorman takes issue with your forward looking estimate of the market risk premium of 8.4%, which he calls "wildly exaggerated and not reasonable". Do you agree?

A. No. The market return of 13.9% is based on the dividend yield plus the consensus of analysts' forecasts of earnings growth for the individual companies that make up the S&P 500. The resulting estimated market return of 13.9% is not out of line with the 13.2% average annual return that has been achieved by investors since the end of World War II; see Exhibit 3.0, Schedule 11. I would further note that my estimate of the forward looking market return of 13.9% is very similar to Ms. Freetly's 13.66%.

Q. Mr. Gorman disagrees with your use of income returns in estimating the future risk premium. You have addressed the issue of income returns earlier in this testimony. Do you have anything to add?

A. Yes. It is appropriate to use historic income returns on bonds as the estimate of the *ex ante* expected risk-free rate while simultaneously using total returns on equities when the historic equity returns do not exhibit any observable trends over time. I conducted the same analysis for the overall equity market returns that I did for utility stock returns (as discussed above) and came to a similar conclusion (See Exhibit 13.0, Schedule 5). There are no observable secular trends in the equity market returns that suggest those returns were not a reasonable reflection, on average, of expectations. Thus, there is no reason that they would not be used by investors in making estimates of future expected returns.

Q. Mr. Gorman also disagrees with your upward adjustment to the achieved market risk premium to take account of the spread between 20-year and 10-year bond yields. In his critique, he points to the current low spread between 10- and 20-year bonds as evidence that the upward adjustment is uncalled for. Please respond.

A. The fact that the yield curve is reasonably flat at the present time does not alter the historic difference between 10- and 20-year bond yields. The typical historic difference between 10- and 20-year bond yields would produce a measured risk premium above 10-year bonds close to 50 basis points higher than the corresponding premium above 20-year bonds. To put this in perspective, the average difference between the return on Treasury bills and the income return on 20-year Treasury bonds over the period 1926-2004 was 140 basis points. This difference is to be expected, since investors in long-term bonds require a premium to commit their capital for twenty years rather than 90-days. The difference between 90-day T-bills and 20-year Treasury bond yields leads to an actual risk premium above Treasury bills that has been 140 basis points higher than the premium above the 20-year Treasury bonds income returns.[5]

[5] As documented in Ibbotson Associates, *Stocks, Bonds, Bills and Inflation, 2005 Yearbook*, page 117.

It would be entirely inappropriate to take the higher risk premium above Treasury bills and add it to the yield on 20-year Treasury bonds, in any interest rate environment, whether it is one characterized by an upward sloping, flat, or downward sloping yield curve. The same conclusion applies to the risk premium measured above 20-year bonds. It cannot be applied to a 10-year Treasury bond yield. The risk premium must be estimated in relation to a risk-free rate whose term to maturity is the same as the risk-free rate to which that risk premium is then added.

Q. Mr. Gorman also criticizes your DCF-based risk premium test for the same reason. He says that you measured the risk premium in relation to 20-year Treasury bonds and then adjusted the results for the spread between 10- and 20-year Treasury bonds. Is he correct?

A. No. Mr. Gorman apparently misunderstood the DCF-based risk premium analysis. The DCF-based risk premium was measured in relation to 10-year Treasury yields, and applied to 10-year Treasury yields. The only adjustment that was made recognized the inverse relationship between the risk premium and interest rates that is that the required risk premium tends to be higher at lower levels of interest rates.

Q. Mr. Gorman, Mr. Cuthbert and Mr. Bodmer criticize using forecast bond yields in the equity risk premium tests. Both Mr. Cuthbert and Mr. Bodmer take the position that the use of forecasted interest rates is inconsistent with the reliance on a historic test year. Is the historic test year a relevant consideration to the use of forecast bond yields in an equity risk premium study?

A. No. The cost of equity, in contrast to the other elements of the revenue requirement, is a forward-looking estimate by its very nature. Analysts obviously use

forecasts of growth to estimate the DCF costs and forecasted market returns to estimate the market risk premium. The use of forecast interest rates in the application of the equity risk premium test is totally unrelated to the fact that the revenue requirement is set on the basis of a historic test year.

Q. The use of forecasted interest rates is also criticized because forecasts of interest rates are inaccurate. Is this a valid criticism?

A. Forecasts are always subject to uncertainty. No one can accurately predict the intervening events that may cause actual experience to turn out differently than expected. Nevertheless, when I was preparing my direct testimony, the ongoing tightening of monetary policy, which was expected to continue, could reasonably have been expected to increase long-term government bond yields to a level more consistent with the long-term equilibrium yield (discussed at Exhibit 3.0, lines 5801-812 as well as in Ms. Freetly's testimony at page 13). Since my testimony was prepared, 10-year Treasury note yields have already increased from 4.2% (third quarter 2005) to 5.1% currently. Since the requested customer rates may reasonably be expected to remain in place beyond this time frame, it is a reasonable approach to utilize forecast interest rates for purposes of applying the risk premium tests.

Q. Mr. Cuthbert claims that your risk premium results are overstated because you did not incorporate corporate bond yields into the analysis. How do you respond?

A. The standard financial models call for estimating the risk premium in relation to the risk-free rate, for which government bond yields are a proxy. There is no inherent reason that a risk premium test performed by reference to corporate bonds should

produce an estimated cost of equity that is lower than a risk premium test that uses government bond yields. If the risk premium test is properly structured, it should not make a difference whether the forward-looking risk premium is measured in relation to corporate bond yields or the government bond yield.

<u>Adjustments for Market Values</u>

Q. Ms. Freetly states that under original cost ratemaking, ratepayers provide a return only on the capital invested in assets to serve ratepayers, that inflating that return for capital not invested in plant is neither fair nor appropriate, and that an adjustment to recognize market values would render the establishment of an original cost rate base a pointless exercise. What is your response to her statements?

A. I agree that, under original cost ratemaking, the return is applied to the amount of capital that is on the books of the utility. That fact, however, does not predetermine the manner in which the return is to be estimated. I disagree that an adjustment to the market derived return to recognize market values renders the establishment of an original cost rate base a pointless exercise.

As I discussed in my direct testimony, an understanding of the historical context may assist in understanding why an original cost rate base was adopted as the standard. As I previously stated (Exhibit 3.0, lines 148-160), in the early years of rate of return regulation in North America, there was considerable debate over how to measure the investment base. The controversy arose from the objective that the price for a public utility service should allow a fair return on the fair value of the capital invested in the business. The debate focused on whether historic cost, reproduction cost or market value

equated to "fair value". The courts determined that the "reasonableness of the end result" should be the criterion rather than a particular method of rate base determination. The use of a historic cost rate base became the norm because it provided an objective, measurable point of departure to which the return would be applied. There is no prescription, however, that the historic cost rate base itself constitutes the "fair value" of the investment.

Q. Ms. Freetly claims that the fair rate of return is determined exogenously from the ratemaking process. Is this correct?

A. No. The fair return cannot be determined independently of the type of rate base that is used. The allowed return on capital is determined differently in jurisdictions that use original cost, current cost or trended original cost rate bases.

Q. Have any U.S. regulators that use original cost rate base made adjustments to the market-derived cost of equity in recognition of the distinction between market and book values?

A. Yes, as I indicated in response to DR IIEC 2-3, the Pennsylvania Public Utility Commission has recognized that the cost of equity is estimated in relation to market value capital structures but applied to book value capital structures. The latter, as recognized by the Pennsylvania commission, entail a higher level of financial risk from an investor's perspective than the market value capital structures. The required return on equity is a function of both business and financial risk; the higher the financial risk, the higher the required return on equity. The higher financial risk implied by the lower book value common equity ratios results in a higher required common equity return. In the words of the Pennsylvania Public Utility Commission,

> "We find it reasonable that a financial risk adjustment, as proposed by PPL, is necessary to compensate PPL for the mismatched application of a market based cost of common equity to a book value common equity ratio. The adjustment is necessary because the DCF method produces the investor required return based on the current market price, not the return on the book value capitalization. PPL has demonstrated that the market value of the equity in its Electric Company Proxy Group's capitalization is much higher than its equity book value capitalization." R-00049255 *Pennsylvania Public Utility Commission et al. v. PPL Electric Utilities Corporation*, 99 PA PUC 389, December 2004.

Q. You indicate that the cost of equity is estimated in relation to market values, not book values of capital structure. Can you provide a common sense example to demonstrate that market values of equity are relied on by investors when assessing financial risk?

A. Yes. Assume that I took out a mortgage on my home of $100,000 when I purchased my home. My home is worth $250,000 if I sold it today. If I were applying for a loan, the bank would consider my net worth (equity) to be $150,000, not the "book value" of my home, which reflects the original purchase price less the mortgage loan amount. It is the market value of my home that determines my financial risk to the bank, not the original purchase price. The same principle applies when the cost of equity is estimated for common equity. The book value of the shares is not the relevant measure of financial risk to investors; it is the market value, that is, the value at which the shares could be sold.

Q. Both Ms. Freetly and Mr. Cuthbert express the view that, if the Commission were to adjust the market-derived return on equity to recognize the long-run equilibrium market value, that would perpetuate further increases in the

market/book ratio, requiring further upward movements in the allowed return. Are they correct?

A. No, for two reasons. First, in principle, if the utility is allowed to earn (and does earn) the return on equity that investors expect, the investor's market return will equal the cost of equity, and the market/book ratio should remain unchanged. The table below demonstrates why. The table assumes that, at an illustrative cost of equity of 10.0%, a return on equity of 11.5%, and a market/book ratio of 1.5, the investor will earn a market return of 9.5%, the utility will earn a return on book value of 11.5%, and the market/book ratio will remain at 1.5.

Table 5

Effect on 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	$10.55	$11.13	$11.75	$12.40
2	Market Value $(2)_{t-1}$ x (+ $(8)_{t-1}$)	$15.00	$15.83	$16.70	$17.62	$18.60
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**	11.5%	11.5%	11.5%	11.5%	11.5%
6	Earnings per Share (1) x (5)	$1.15	$1.21	$1.28	$1.35	$1.43
7	Dividends per Share (4) x (6)	$0.60	$0.63	$0.67	$0.70	$0.70
8	Growth (5) x (1-(4))	5.5%	5.5%	5.5%	5.5%	5.5%
9	Dividend Yield (7)/(2)	4.0%	4.0%	4.0%	4.0%	4.0%
10	**Market Return** **$[((2) + (7)_{t-1})/(2)_{t-1}] - 1$**	--	9.5%	9.5%	9.5%	9.5%

Table 5 shows that, consistent with the assumptions of the constant growth DCF model, earnings, dividends, book and market values will all increase at the same rate, and the market/book ratio does not change. Changes in market/book ratio would occur only if the cost of capital changes or the expected return on book equity changes.

Second, the adjustment for market/replacement cost is made by reference to the long-run equilibrium market/book ratio; it does not simply accept whatever happens to be the prevailing market/book ratio is an appropriate benchmark.

Q. Would the adjustment result in investors being compensated twice for inflation, as Ms. Freetly and Mr. Bodmer suggest?

A. No. The adjustment recognizes that, under competition, which regulation is intended to emulate, prices are established by reference to current costs of assets, and a current (nominal) cost of capital.

Q. Is Ms. Freetly correct that nothing in financial theory suggests that stock prices are based on replacement costs?

A. No. The long-run equality between market value and replacement cost is part of macroeconomic theory and at the heart of the Q Theory of Investment; see Exhibit 3.0, lines 647-675.

<u>Comparable Earnings Test</u>

Q. Ms. Freetly and Mr. Gorman criticize the use of the comparable earnings model because it is an accounting-based model, not a capital market-driven model. Do you agree?

A. Yes, the comparable earnings test is not a market-driven model and does not estimate the investor's required return on equity (as measured relative to market values). It is not intended to do so. There are three criteria for setting a fair return on equity, the ability to attract capital at reasonable rates, the maintenance of financial integrity and the opportunity to earn returns commensurate with those of comparable risk companies. The market-driven tests (DCF and risk premium/CAPM) directly address the first two criteria. The comparable earnings test addresses the third. The U.S. Supreme Court in *Bluefield Water Works & Improvement Co. v. Public Service Commission of West Virginia*, 262 U.S. 679, 692 (1923) stated that a public utility is entitled to:

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

Implementation of this standard, as articulated in *Bluefield*, needs to recognize that the regulatory construct (original cost rate base) and the manner in which the return is determined and set are not independent. In a truly competitive environment, prices are set on the basis of market values, not book values. Under original cost regulation, where the equity used for regulatory purposes is based on the original cost, the comparable earnings test is a meaningful guideline for a fair return. I would also note that, for purposes of my testimony, the comparable earnings test was used primarily for the purpose of assessing the reasonableness of the returns that were estimated by reference to the market-driven tests, inclusive of the adjustments warranted for the differences between the book value to which the return is applied and the market values underpinning the estimation of the investor's required return.

Q. Mr. Gorman also criticizes the method you use to adjust the returns of the comparable companies (relative betas) for the somewhat lower total risk of your sample of utilities as compared to the industrials. He states that there is no financial or academic support for the adjustment. Is he correct?

A. He is correct that there is no financial or academic support for the manner in which the adjustment is made. The reason for this lack of support is because the comparable earnings test is only relevant in the context of public utility regulation which applies the allowed return to an original cost rate base. Nevertheless, using relative betas to adjust the returns provides a rational quantitative method that ensures the results of

comparable earnings test are applicable to a sample of utilities that is somewhat less risky than the unregulated firms.

Q. Please discuss Mr. Cuthbert's concerns with your comparable earnings test.

A. Mr. Cuthbert's concerns with the comparable earnings test can be characterized as application issues rather than conceptual issues. His two principal issues are (1) his view that the comparable unregulated companies have a significantly different risk profile than utilities; and (2) that the results of the test did not take into account the lower returns achieved during the latter part of the business cycle.

With respect to the former, Mr. Cuthbert points to the materially higher common equity ratio of the non-regulated companies, to suggest that this is an indication of the difference in risk. Risk has two basic dimensions, business and financial. It is precisely because the higher common equity ratios (lower financial risk) of the non-regulated companies offset their higher business risk, that the non-regulated companies are of approximately similar total (or investment) risk to the sample of utilities. This similarity is demonstrated by their relatively similar debt ratings,[6] betas and *Value Line* Safety Ranks (See Exhibit 3.0, lines 1186-1195 and footnote 24).

[6] The fact that many of the non-regulated firms do not have debt ratings is a function of their high common equity ratios, which is an indication of limited requirements to access the long-term debt markets.

With respect to the second concern, the observed pattern in returns, that is, lower returns experienced in the latter half of the business cycle than in the first half, is consistent with what would be expected over the business cycle: higher returns in the expansionary period and lower returns as the cycle moves toward a downturn. The addition of the returns on equity for 2005, which were 14.2% (based on the sample median), and the median *Value Line* forecast returns of 14.4% for the period 2008-2010 (Exhibit 3.0, Schedule 14), support the conclusion that there is no downward trend in the earned returns. Consequently the risk-adjusted cycle average returns of 12.75% to 13.25% are the relevant benchmark.

Q. Does this conclude your rebuttal testimony?

A. Yes.

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