

**EXECUTIVE SUMMARY  
FOR THE REBUTTAL TESTIMONY OF  
DR. JAMES H. VANDER WEIDE, PH.D.  
ON BEHALF OF  
THE EMPIRE DISTRICT ELECTRIC COMPANY  
BEFORE THE  
MISSOURI PUBLIC SERVICE COMMISSION  
CASE NO. ER-2006-0315**

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**Purpose of Testimony:**

Dr. Vander Weide analyzes the pre-filed direct testimonies of Mr. David Murray, filed on behalf of the Office of the Staff of the Missouri Public Service Commission, and Mr. Charles W. King, filed on behalf of the Office of the Public Counsel of the State of Missouri. On the basis of his analysis, Dr. Vander Weide concludes that Mr. Murray and Mr. King have significantly underestimated the cost of equity for The Empire District Electric Company ("Empire" or "the Company"). Dr. Vander Weide's initial and updated cost of equity results continue to support the conclusion that his recommended 11.7 percent cost of equity for Empire is conservative.

Dr. Vander Weide's rebuttal testimony focuses on several areas of Mr. Murray's and Mr. King's cost of equity studies, including their choice of proxy companies and their discounted cash flow ("DCF") and Capital Asset Pricing Model ("CAPM") analyses. In addition, Dr. Vander Weide refutes Mr. King's remarks concerning Dr. Vander Weide's risk premium analyses.

**Proxy Company Selection.** Dr. Vander Weide demonstrates that Mr. Murray's and Mr. King's cost of equity results are sensitive to their choices of proxy companies. The purpose of proxy selection criteria is to identify the largest possible group of comparable risk companies that have sufficient data to reliably apply cost of equity methodologies such as the DCF, CAPM, and risk premium. However, rather than choosing the largest possible number of comparable risk companies as a proxy group for Empire, Mr. Murray chose a proxy group of just five companies, and Mr. King chose a group of 16 companies as proxies for Empire. Mr. Murray and Mr.

King defend their choices of proxy groups on the grounds that these companies, in their opinion, are in similar lines of business as Empire, but they fail to recognize that the average risk of their small samples of proxy companies, with a Value Line Safety Rank of 2 and an S&P bond rating of BBB+, is identical to the average risk of Dr. Vander Weide's large proxy group, which includes 34 electric companies.

Dr. Vander Weide demonstrates that it is preferable to choose the largest possible sample of comparable risk companies because the estimate of the cost of equity obtained from applying cost of equity methodologies to a single company is uncertain. Cost of equity methodologies require estimates of quantities such as growth rates, betas, and expected risk premiums that necessarily involve a degree of uncertainty. However, the uncertainty in estimating the cost of equity by applying cost of equity methodologies to a single company can be significantly reduced by applying cost of equity models to a relatively large group of comparable risk companies. Intuitively, any over- and under-estimate of the cost of equity that arises from the application of cost of equity methods to a single company is averaged out by applying the methods to a larger group of comparable risk companies.

In addition, choosing a relatively small group of proxy companies requires a great deal of judgment, and the analyst may be tempted to choose a set of selection criteria that produce a desired result. The possibility of selection bias can be eliminated by starting with the largest possible group of comparable risk companies and eliminating only those companies with insufficient data to estimate the cost of equity.

Thus, the results of Dr. Vander Weide's application of cost of equity methods to a large sample of companies that have the same risk as Mr. Murray's and Mr. King's small samples of companies are more reliable than Mr. Murray's and Mr. King's results.

**Discounted Cash Flow Model.** Mr. Murray and Mr. King employ an annual DCF model to estimate Empire's cost of equity even though the companies in their proxy groups pay quarterly dividends. In addition, Mr. Murray used an incorrect estimate of the first period dividend that, taken by itself, caused him to underestimate the DCF

cost of equity for his proxy group by approximately 25 basis points. In contrast to the low DCF results obtained by Mr. Murray and Mr. King, Dr. Vander Weide's updated DCF application to his large sample of electric companies produced a result of 10.9 percent.

**Capital Asset Pricing Model.** The CAPM requires estimates of the risk-free rate, company-specific risk factor or beta, and risk premium on the market portfolio. Dr. Vander Weide demonstrates that Mr. Murray's and Mr. King's low CAPM results are based on their choices of each of these inputs. If they had based their CAPM calculations on correct inputs from Ibbotson Associates for the market risk premium, the average Value Line beta for a large sample of risk comparable companies, and the forecasted interest rate on long-term U.S. Treasury securities, Mr. Murray and Mr. King would have obtained a CAPM result of 12.2 percent  $[5.5 + (.94 \times 7.1) = 12.2]$ , nearly 250 basis points higher than their low recommended cost of equity. Thus, a correctly implemented CAPM analysis does not support Mr. Murray's or Mr. King's recommended costs of equity for Empire.

**Risk Premium Analyses.** Mr. King criticizes Dr. Vander Weide's risk premium analyses on the grounds that: (1) the mean historical return is a poor predictor of future expected returns; and (2) ex ante risk premium results are inconsistent with DCF results. Dr. Vander Weide refutes Mr. King's criticisms by noting that the advantage of using ex post or historical returns is that they are directly observable evidence of the returns on stocks and bonds that investors have experienced in the marketplace. Although there is high variability in year-to-year historical returns, the average variability is significantly reduced by using the longest period of time for which reliable data are available. With regard to his ex ante risk premium analyses, Dr. Vander Weide explains that the purpose of the ex ante risk premium study is to smooth out unreasonable fluctuations in DCF results by examining both DCF results over a longer period of time and the relationship between DCF results and interest rates. Thus, the ex ante risk premium approach is an additional test of the cost of equity because it provides important information that is not available in simple, point-in-time DCF results for electric utilities.