Exhibit No.:
Issues: Revenue Requirement
Witness: Michael P. Gorman
Type of Exhibit: Direct Testimony
Sponsoring Party: Midwest Energy Users' Association
Case No.: ER-2012-0345
Date Testimony Prepared: November 30, 2012

BEFORE THE PUBLIC SERVICE COMMISSION OF THE STATE OF MISSOURI

In the Matter of The Empire District Electric Company of Joplin, Missouri Tariffs Increasing Rates for Electric Service Provided to Customers in the Missouri Service Area of the Company	))))))))	**Case No. ER-2012-0345**

Direct Testimony and Schedules of

Michael P. Gorman

On behalf of

Midwest Energy Users' Association

November 30, 2012

BAI
BRUBAKER & ASSOCIATES, INC.

Project 9669

BEFORE THE PUBLIC SERVICE COMMISSION OF THE STATE OF MISSOURI

In the Matter of The Empire District Electric Company of Joplin, Missouri Tariffs Increasing Rates for Electric Service Provided to Customers in the Missouri Service Area of the Company	)	**Case No. ER-2012-0345**

STATE OF MISSOURI)
) **SS**
COUNTY OF ST. LOUIS)

Affidavit of Michael P. Gorman

Michael P. Gorman, being first duly sworn, on his oath states:

1. My name is Michael P. Gorman. I am a consultant with Brubaker & Associates, Inc., having its principal place of business at 16690 Swingley Ridge Road, Suite 140, Chesterfield, Missouri 63017. We have been retained by the Midwest Energy Users' Association in this proceeding on their behalf.

2. Attached hereto and made a part hereof for all purposes are my direct testimony and schedules which were prepared in written form for introduction into evidence in the Missouri Public Commission Case No. ER-2012-0345.

3. I hereby swear and affirm that the testimony and schedules are true and correct and that they show the matters and things that they purport to show.

Michael P. Gorman

Subscribed and sworn to before me this 29th day of November, 2012.

MARIA E. DECKER
Notary Public - Notary Seal
STATE OF MISSOURI
St. Louis City
My Commission Expires: May 5, 2013
Commission # 09706793

Notary Public

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Direct Testimony of Michael P. Gorman

Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A Michael P. Gorman. My business address is 16690 Swingley Ridge Road, Suite 140, Chesterfield, MO 63017.

Q WHAT IS YOUR OCCUPATION?

A I am a consultant in the field of public utility regulation and a Managing Principal with Brubaker & Associates, Inc., energy, economic and regulatory consultants.

Q PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.

A This information is included in Appendix A to my testimony.

Q ON WHOSE BEHALF ARE YOU APPEARING IN THIS PROCEEDING?

A This testimony is presented on behalf of the Midwest Energy Users' Association. These companies purchase substantial amounts of electricity from The Empire District Electric Company ("Empire" or "Company") and the outcome of this proceeding will have an impact on their cost of electricity.

Q WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

A I will comment on Empire's proposed capital structure, and I will recommend a fair return on common equity and overall rate of return for Empire.

SUMMARY

Q PLEASE SUMMARIZE YOUR RETURN ON EQUITY RECOMMENDATIONS.

A Based on my proposed capital structure, I recommend the Missouri Public Service Commission (the "Commission") award Empire a return on common equity of 9.50% and an overall rate of return of 7.68%, as shown in Schedule MPG-1.

My recommended return on equity range and capital structure will provide Empire with an opportunity to realize cash flow financial coverages and balance sheet strength that support Empire's current investment grade bond rating. Consequently, my recommended return on equity represents fair compensation given Empire's investment risk, and it will preserve the Company's financial integrity and credit standing.

Further, I recommend adjustments to Empire's proposed ratemaking capital structure. I recommend the common equity supporting Empire's non-regulated operations and investments in subsidiary companies be removed from the capital structure used to develop the overall rate of return for regulated operations. This adjustment is necessary in order to eliminate any subsidies between regulated and non-regulated operations, and is a better estimate of the true cost of capital supporting Empire's utility business. My proposed adjustments to Empire's capital structure would reduce the common equity ratio from the 51.0% proposed by Empire down to 48.8%.

I will also respond to Empire witness Dr. James H. Vander Weide's proposed return on equity of 10.60%. For the reasons discussed below, Dr. Vander Weide's recommended return on equity is excessive and should be rejected.

Q HOW DID YOU ESTIMATE EMPIRE'S CURRENT MARKET COST OF EQUITY?

A I performed analyses using three Discounted Cash Flow ("DCF") models, a Risk Premium ("RP") study, and a Capital Asset Pricing Model ("CAPM"). These analyses used a proxy group of publicly traded companies that have investment risk similar to Empire. Based on these assessments, I estimate Empire's current market cost of equity to be 9.50%.

RATE OF RETURN

Q HOW DOES YOUR RECOMMENDED RETURN ON EQUITY COMPARE TO EMPIRE'S LAST AUTHORIZED RETURN ON EQUITY?

A On July 30, 2008, the Commission issued its final order in Empire's rate case (Missouri Public Service Commission, Case No. ER-2008-0093) which included a return on equity of 10.80%. This authorized return was awarded during the beginning of one of the worst financial crises since the Great Depression.

My recommended return on equity is lower in this case than the return on equity included in Empire's rate case from July 2008. However, this lower return on equity is justified based on clear evidence that capital market costs today are much lower than they were in 2008 when Empire's rates were approved.

Q DO YOU BELIEVE MARKET COSTS OF CAPITAL ARE LOWER TODAY THAN THEY WERE IN EMPIRE'S 2008 RATE CASE?

A Yes. Market costs of capital have declined since Empire's 2008 rate case. This is illustrated by a comparison of bond yields in this case and the 2008 rate case, and is evident from cost of capital estimates in this case versus the 2008 rate case. In Table 1 below, I show the change in utility bond yields.

TABLE 1

Capital Costs – Empire's Rate Cases

Description	Current Case[1]	Case No. ER-2008-0093	Yield Change
"A" Rated Utility Bond Yields	3.99%	6.34%	2.35%
"Baa" Rated Utility Bond Yields	4.66%	6.89%	2.23%
13-Week Period Ending	10/26/2012	7/25/2008	

Source:
[1]Schedule MPG-14, page 1.

As shown in the table above, the current market cost of debt for "A" (by Standard & Poor's ("S&P")) and "Baa" (by Moody's) rated utility bond yields has decreased in this case relative to Empire's 2008 rate case. The current "A" and "Baa" rated utility bond yield is over 2.0 percentage points lower now than it was in Empire's 2008 rate case.

There is also clear evidence in the Company's filing that shows the significantly lower capital costs today relative to the costs in 2008. In Empire's 2008 rate case, Dr. Vander Weide proposed a return on equity of 11.60% which is 100 basis points higher than his proposed return of 10.60% in this regulatory proceeding. Therefore, Empire has acknowledged that the capital costs today should be much lower than they were in 2008.

Electric Utility Industry Market Outlook

Q PLEASE DESCRIBE THIS SECTION OF YOUR TESTIMONY.

A I begin my estimate of a fair return on equity for Empire by reviewing the market's assessment of electric utility industry investment risk, credit standing, and stock price performance in general. I used this information to get a sense of the market's perception of the risk characteristics of electric utility investments in general, which is then used to produce a refined estimate of the market's return requirement for assuming investment risk similar to Empire's utility operations.

Based on the assessments described below, I find the credit rating outlook of the industry to be strong and supportive of the industry's financial integrity, and electric utilities' stocks have exhibited strong price performance over the last several years.

Based on this review of credit outlooks and stock price performance, I conclude that the market has again embraced the electric utility industry as a safe-haven investment, and views utility equity and debt investments as low-risk securities.

Q PLEASE DESCRIBE THE ELECTRIC UTILITIES' CREDIT RATING OUTLOOK.

A Electric utilities' credit rating outlook has improved over the recent past and is now stable. S&P recently provided an assessment of the credit rating of U.S. electric utilities. S&P's commentary included the following:

> **Industry Credit Outlook**
>
> **Strong capital market access expected to continue**
>
> We have seen that investor appetite for electric first mortgage bonds remains healthy, with deals continuing to be oversubscribed at attractive rates. Credit fundamentals indicate that most, if not all, regulated utilities should continue to have consistent and ample

> access to funding sources and credit. Issuance of common stock to partially fund construction spending is also possible for some firms, and would help to support capital structure balance. Liquidity is an industry strength and has been improving. Banking syndicates are expressing willingness to negotiate credit facilities, now with lengthening terms, of up to five years and with favorable terms. Uncertainty in global financial markets has not noticeably affected regulated domestic utilities. This market access is crucial, especially in light of increasing capital budgets to address rising investment requirements for the industry.

* * *

> **Ratings stability for sector is likely**

> On the whole, the regulated utility industry has continued to weather the challenging economy of the past few years with little lasting effect on the industry's collective financial risk profile. The essential service that these companies provide and the rate-regulated nature of the business enable them to generate reasonably steady cash flows and to recover the bulk of their costs from customers, despite economic conditions and the challenge of heavy investment needs. Also, we expect the industry to continue to have high liquidity levels. Therefore, we expect credit quality of regulated electric, gas, and water utilities to remain stable.[1]

Similarly, Fitch states:

> **Electric Utilities: Stable**

> Fitch's Outlook for the electric utility sector in 2012 remains stable. The sector benefits from low interest rates, modest inflationary pressures, open capital markets, and low natural gas and power prices. Fitch expects these conditions to persist into 2013.

> The favorable funding environment helps to offset any stress that would otherwise result during an extended period of high projected capital investment. Capex is expected to remain elevated, increasing 5%–6% over 2011 levels.[2]

Value Line also continues to characterize utility stock investments as a safe haven, even though it notes that investors are now willing to accept more risk:

[1] *Standard & Poor's RatingsDirect on the Global Credit Portal*: "Industry Report Card: A Stable Industry Outlook Supports Solid Ratings For U.S. Regulated Electric, Gas, And Water Utilities," October 22, 2012 at 6-7, emphasis added.

[2] *FitchRatings*: "2012 Outlook: Utilities, Power, and Gas," December 5, 2011 at 10.

Conclusion

The broader market averages have significantly outperformed the Electric Utility Industry thus far in 2012. This represents quite a reversal from last year when investors flocked to utility stocks, seeking safe havens from heightened volatility in other sectors. As economic fears have subsided, the investment community has appeared to become more venturesome with its stock picks, which may be contributing to the utility underperformance.[3]

The Edison Electric Institute ("EEI") also opined as follows:

Steady Industry Fundamentals

Indeed, broad global macroeconomic forces have been the principle driver of utility stock returns in recent years, relative to other market sectors. Investors now take mostly as a given the industry's reasonably strong business fundamentals. Utilities are undertaking sizeable and wide-ranging capital investment programs that include distribution network upgrades, Smart Grid investments, a significant boost in the pace of transmission investment, rising emissions-related capex driven by the need to comply with EPA regulations, and generation investments in select power markets.

* * *

Credit analysts are generally positive on the industry's ability to finance an aggressive pace of investment, noting that while it is now cash flow negative on an annual operating basis, its balance sheets are generally strong and utilities have access to a diverse range of funding sources. The industry weathered the storm of the 2008/2009 financial crisis by postponing optional capex projects and finding cost savings where possible without jeopardizing service quality. Today's economic backdrop is much improved from that period, and with interest rates at multi-decade lows and investors of all types hungry for yield, the capital markets are wide open for most economic sectors, including utilities. The execution risk inherent in managing large, complex construction projects in a way that addresses the interests of both shareholders and regulators seems far more pronounced than financing risk.[4]

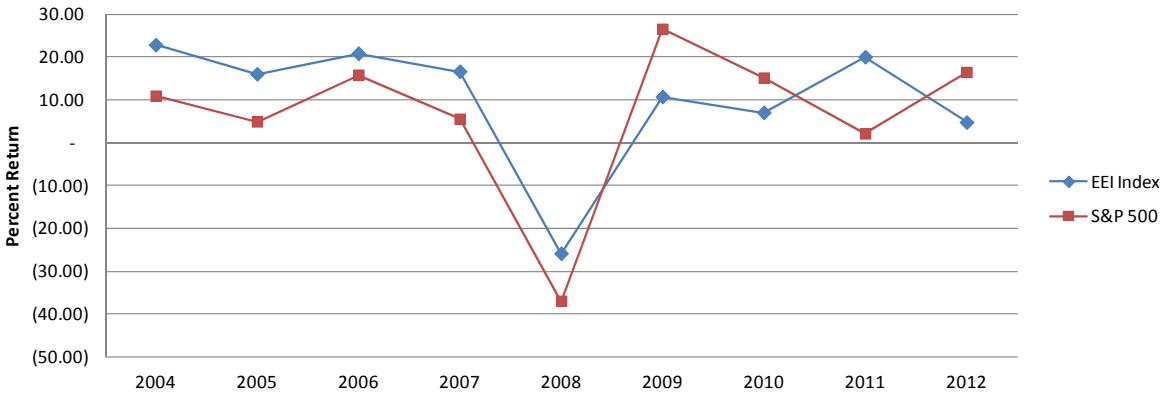
[3] *Value Line Investment Survey*, May 25, 2012 at 137, emphasis added.
[4] *EEI Q3 2012 Financial Update* "Stock Performance" at 5, emphasis added.

Q PLEASE DESCRIBE ELECTRIC UTILITY STOCK PRICE PERFORMANCE OVER THE LAST SEVERAL YEARS.

A As shown in the graph below, the EEI has recorded electric utility stock price performance compared to the market. The EEI data shows that its Electric Utility Index has outperformed the market, with a few exceptions, triggered by the recent state of the economic environment.

FIGURE 1

Index Comparison



Source: EEI Q3 2012 Stock Performance Financial Update, at Page 1.

During 2009 and 2010, the EEI Index underperformed the market, which is not unusual for stocks that are considered "safe havens" during periods of market turbulence. This trend was once again reestablished in 2011 during the economic slowdown when the EEI index produced double digit returns of 20% followed by a significant underperformance producing returns of below 5%.

Specifically, EEI states the following:

> **Mixed Valuation Signals**
>
> The broad market's gains during Q3 along with the EEI Index's flat performance removed some of the richness to utility share valuations that several analysts noted at the end of Q2. Indeed, the magnitude of underperformance for the first nine months of 2012 is similar to that which occurred during the same period of 2009, after markets

bottomed and then recovered from the losses produced by the financial crisis. As the market recovery continued in 2010, with 14% to 17% gains, the staid utility sector's 7% return could not keep pace. Yet when 2011 produced worries of economic slowdown, the worsening of the European debt crisis and the summer's woefully memorable deficit gridlock and S&P downgrade of U.S. Treasury debt in August — along with sharply falling interest rates — the EEI Index powered forward with a 20% return against single-digit gains across the broader markets.

With the industry business models now set on regulated or mostly regulated structures, and with slow growth in earnings and dividends as the main appeal for investors, such periodic reversals of fortune, driven by changing economic prospects and investor sentiments, seem likely to continue. Interest rates are now at multi-decade lows and while analysts still cite utility price/earnings ratios as above average, 4% dividend yields give utility shares considerable price support relative to the lower yields available from bonds.[5]

Empire Investment Risk

Q PLEASE DESCRIBE THE MARKET'S ASSESSMENT OF THE INVESTMENT RISK OF EMPIRE.

A The market assessment of Empire's investment risk is best described by credit rating analysts' reports. Empire's corporate credit ratings from S&P and Moody's are "BBB-" and "Baa2," respectively. The Company's credit standing from both agencies is "Stable."

S&P specifically stated:

Rationale

Standard & Poor's Ratings Services' ratings on Joplin, Mo.-based utility Empire District Electric Co. reflect an "excellent" business risk profile and an "aggressive" financial risk profile under our criteria.

Although Empire is relatively small, its business risk profile is excellent given a diverse service territory with limited cyclical industrial concentration (approximately 15% of its total retail load), a straightforward integrated utility business model, and a cost-conscious management team. These characteristics are tempered by a

[5] *Id*. at 6.

historically challenging regulatory environment in Missouri, which we view as less credit supportive than those in other states. However, the Missouri Public Service Commission (MPSC) appears to be becoming more responsive to the company's rate needs, as demonstrated by approval of settlement agreements and implementation of a fuel-adjustment clause that allows the company to recover 95% of changes in fuel and purchased-power costs in a timely manner.

* * *

The company's financial risk profile is aggressive in our view, based on our expectation that debt leverage will remain somewhat liberal and that Empire's heavy construction program will result in weakened cash flow metrics. In that regard, we expect debt to total capitalization and adjusted funds from operations (FFO) to hover around 55% and 14%, respectively, during the peak years (2014 and 2015) of capital spending.[6]

Empire's Proposed Capital Structure

Q WHAT CAPITAL STRUCTURE IS THE COMPANY REQUESTING TO USE TO DEVELOP ITS OVERALL RATE OF RETURN FOR ELECTRIC OPERATIONS IN THIS PROCEEDING?

A Empire's proposed capital structure, as supported by Empire witness Mr. Robert W. Sager, is shown below in Table 2.

TABLE 2

Empire's Consolidated Capital Structure
(March 31, 2012)

Description	Percent of Total Capital
Long-Term Debt	49.0%
Common Equity	51.0%
Total Regulatory Capital Structure	100.0%

Source: Robert Sager Direct at 2-3.

[6] *Standard & Poor's RatingsDirect on the Global Credit Portal*: "Summary: Empire District Electric Co.," September 4, 2012 at 2, emphasis added.

Q HOW DID THE COMPANY DEVELOP ITS PROPOSED CAPITAL STRUCTURE?

A The Company is proposing to use its March 31, 2012 total Company consolidated capital structure adjusted for debt refinancing that occurred in the second quarter of 2012, and to remove short-term debt.

Q IS THE COMPANY'S PROPOSED CAPITAL STRUCTURE REASONABLE?

A No. Empire's proposed capital structure reflects common equity supporting goodwill and non-utility investments.

Q WHY IS IT APPROPRIATE TO REMOVE THE COMMON EQUITY SUPPORTING GOODWILL AND NON-UTILITY INVESTMENTS?

A Capital supporting goodwill and the non-utility investments is not related to the cost of providing regulated utility service in Missouri. A goodwill asset is an accounting transaction that represents the premium Empire paid for certain gas utility assets above their book value. The premium or goodwill increased Empire's assets and common equity capital. The non-premium value of the gas utility assets are reflected as plant in-service and capital supporting this level of investment. The capital supporting plant in-service is included in the ratemaking capital structure. However, common equity capital supporting the premium paid for these assets does not represent the capital that was used to make direct investments in utility plant and equipment, and therefore is not a component of regulated cost of service.

Similarly, capital supporting investments in non-regulated plant and equipment does not impact Empire's cost of utility plant and equipment. Therefore, the capital supporting these non-utility investments should be removed from the ratemaking

capital structure used to estimate Empire's cost of capital for regulated utility operations.

Q PLEASE DESCRIBE YOUR PROPOSED ADJUSTMENT TO EMPIRE'S CAPITAL STRUCTURE.

A I developed my proposed capital structure by starting with the Company's consolidated capital structure at March 31, 2012 and removing capital supporting goodwill and non-utility investments. Note that when the Company trues up its capital structure, this same adjustment should be made at the true-up date.

To remove the capital supporting goodwill, I reduced Empire's common equity by the amount of the goodwill asset. Goodwill is an accounting asset that does not create cash flows and therefore cannot be supported by utility debt. Indeed, the accounting rules require Empire to conduct an impairment study of the goodwill asset each year. To the extent the asset is impaired, the asset value would be written down and the common equity balance would be written down to correspond to the reduction in the impaired asset value. This keeps the balance sheet in balance.

My adjustment for non-utility investments is based on equity supporting these non-utility investments, less the amount of on-balance-sheet capital lease that supports these investments. Empire states in its 2011 SEC 10-K at 17 that these assets are supported by capital lease obligations. Hence, I started with the net non-utility investment of $23.9 million and reduced that by capital lease obligations of $4.7 million. The net difference here then was subtracted from the common equity balance on the consolidated capital structure.

The net result of this is shown on my Schedule MPG-1, with detailed adjustments shown on page 2 of that same schedule.

Q WHAT CAPITAL STRUCTURE DO YOU PROPOSE BE USED TO SET RATES IN THIS PROCEEDING?

A As shown in Schedule MPG-1, my proposed capital structure reflects Empire's debt and equity capital supporting its regulated operations. The capital structure is consistent with the capital structure of the companies included in my proxy group.

I recommend the capital structure weights shown below in Table 3 be used to develop Empire's overall rate of return.

TABLE 3

MEUA Proposed Capital Structure

Description	Percent of Total Capital
Long-Term Debt	51.2%
Common Equity	48.8%
Total Regulatory Capital Structure	100.0%

Source: Schedule MPG-1.

Q WILL THIS CAPITAL STRUCTURE AND YOUR RETURN ON EQUITY SUPPORT EMPIRE'S FINANCIAL INTEGRITY AND ACCESS TO CAPITAL?

A. Yes. I provide a full review of my recommended rate of return, including return on equity and proposed capital structure and its ability to support credit metrics consistent with Empire's strong investment grade credit rating. As shown below, my proposed overall rate of return will support Empire's financial integrity and access to capital.

Return on Equity

Q PLEASE DESCRIBE WHAT IS MEANT BY A "UTILITY'S COST OF COMMON EQUITY."

A A utility's cost of common equity is the return investors require on an investment in the utility. Investors expect to achieve their return requirement from receiving dividends and stock price appreciation.

Q PLEASE DESCRIBE THE FRAMEWORK FOR DETERMINING A REGULATED UTILITY'S COST OF COMMON EQUITY.

A In general, determining a fair cost of common equity for a regulated utility has been framed by two hallmark decisions of the U.S. Supreme Court: Bluefield Water Works & Improvement Co. v. Pub. Serv. Comm'n of W. Va., 262 U.S. 679 (1923) and Fed. Power Comm'n v. Hope Natural Gas Co., 320 U.S. 591 (1944).

These decisions identify the general standards to be considered in establishing the cost of common equity for a public utility. Those general standards provide that prudently managed utilities' authorized return should: (1) be sufficient to maintain financial integrity; (2) attract capital under reasonable terms; and (3) be commensurate with returns investors could earn by investing in other enterprises of comparable risk.

Q PLEASE DESCRIBE THE METHODS YOU HAVE USED TO ESTIMATE THE COST OF COMMON EQUITY FOR EMPIRE.

A I have used several models based on financial theory to estimate Empire's cost of common equity. These models are: (1) a constant growth Discounted Cash Flow ("DCF") model using consensus analysts' growth rate projections; (2) a constant

growth DCF using sustainable growth rate estimates; (3) a multi-stage growth DCF model; (4) a Risk Premium model; and (5) a Capital Asset Pricing Model ("CAPM"). I have applied these models to a group of publicly traded utilities that I have determined share investment risk similar to Empire's.

Q HOW DID YOU SELECT A UTILITY PROXY GROUP SIMILAR IN INVESTMENT RISK TO EMPIRE TO ESTIMATE ITS CURRENT MARKET COST OF EQUITY?

A I relied on the same utility proxy group used by Empire witness Dr. Vander Weide to estimate Empire's return on equity. However, I excluded Duke Energy because its valuation measures were impacted by its recent merger with Progress Energy.

Q HOW DOES THE PROXY GROUP INVESTMENT RISK COMPARE TO EMPIRE'S INVESTMENT RISK?

A The proxy group is shown in Schedule MPG-2. This proxy group has an average corporate credit rating from S&P of "BBB+," which is higher than S&P's corporate credit rating for Empire of "BBB-." The proxy group's corporate credit rating from Moody's is "Baa2," which is identical to Empire's corporate credit rating from Moody's. The comparable bond rating indicates that the proxy group has comparable investment risk to Empire.

The proxy group has an average common equity ratio of 43.6% (including short-term debt) from SNL Financial ("SNL") and 47.0% (excluding short-term debt) from *Value Line* in 2011. The proxy group's common equity ratio is lower than the consolidated Company's common equity ratio of 51.0%, which indicates Empire's lower financial risk.

I also compared Empire's business risk to the business risk of the proxy group based on S&P's ranking methodology. Empire has an S&P business risk profile of "Excellent," which is identical to the S&P business risk profile of the proxy group. The S&P business risk profile score indicates that Empire's business risk is comparable to that of the proxy group.[7]

Based on these proxy group selection criteria, I believe that my proxy group reasonably approximates the investment risk of Empire, and can be used to estimate a fair return on equity for Empire.

Discounted Cash Flow Model

Q PLEASE DESCRIBE THE DCF MODEL.

A The DCF model posits that a stock price is valued by summing the present value of expected future cash flows discounted at the investor's required rate of return or cost of capital. This model is expressed mathematically as follows:

$$P_0 = \frac{D_1}{(1+K)^1} + \frac{D_2}{(1+K)^2} \ldots . \frac{D_\infty}{(1+K)^\infty} \quad \text{where} \qquad \text{(Equation 1)}$$

P_0 = Current stock price
D = Dividends in periods 1 - ∞
K = Investor's required return

This model can be rearranged in order to estimate the discount rate or investor-required return, "K." If it is reasonable to assume that earnings and dividends will grow at a constant rate, then Equation 1 can be rearranged as follows:

[7] S&P ranks the business risk of a utility company as part of its corporate credit rating review. S&P considers total investment risk in assigning bond ratings to issuers, including utility companies. In analyzing total investment risk, S&P considers both the business risk and the financial risk of a corporate entity, including a utility company. S&P's business risk profile score is based on a six-notch credit rating starting with "Vulnerable" (highest risk) to "Excellent" (lowest risk). The business risk of most utility companies falls within the lowest risk category, "Excellent," or the category one notch lower (more risk), "Strong." *Standard & Poor's:* "Criteria Methodology: Business Risk/Financial Risk Matrix Expanded," May 27, 2009.

$$K = D_1/P_0 + G \qquad \text{(Equation 2)}$$

K = Investor's required return
D_1 = Dividend in first year
P_0 = Current stock price
G = Expected constant dividend growth rate

Equation 2 is referred to as the annual "constant growth" DCF model.

Q PLEASE DESCRIBE THE INPUTS TO YOUR CONSTANT GROWTH DCF MODEL.

A As shown in Equation 2 above, the DCF model requires a current stock price, expected dividend, and expected growth rate in dividends.

Q WHAT STOCK PRICE HAVE YOU RELIED ON IN YOUR CONSTANT GROWTH DCF MODEL?

A I relied on the average of the weekly high and low stock prices of the utilities in the proxy group over a 13-week period ending on October 26, 2012. An average stock price is less susceptible to market price variations than a spot price. Therefore, an average stock price is less susceptible to aberrant market price movements, which may not be reflective of the stock's long-term value.

A 13-week average stock price reflects a period that is still short enough to contain data that reasonably reflect current market expectations, but the period is not so short as to be susceptible to market price variations that may not reflect the stock's long-term value. In my judgment, a 13-week average stock price is a reasonable balance between the need to reflect current market expectations and the need to capture sufficient data to smooth out aberrant market movements.

Q WHAT DIVIDEND DID YOU USE IN YOUR CONSTANT GROWTH DCF MODEL?

A I used the most recently paid quarterly dividend, as reported in *The Value Line Investment Survey*.[8] This dividend was annualized (multiplied by 4) and adjusted for next year's growth to produce the D_1 factor for use in Equation 2 above.

Q WHAT DIVIDEND GROWTH RATES HAVE YOU USED IN YOUR CONSTANT GROWTH DCF MODEL?

A There are several methods that can be used to estimate the expected growth in dividends. However, regardless of the method, for purposes of determining the market-required return on common equity, one must attempt to estimate investors' consensus about what the dividend or earnings growth rate will be, and not what an individual investor or analyst may use to make individual investment decisions.

As predictors of future returns, security analysts' growth estimates have been shown to be more accurate than growth rates derived from historical data.[9] That is, assuming the market generally makes rational investment decisions, analysts' growth projections are more likely to influence observable stock prices than growth rates derived only from historical data.

For my constant growth DCF analysis, I have relied on a consensus, or mean, of professional security analysts' earnings growth estimates as a proxy for investor consensus dividend growth rate expectations. I used the average of analysts' growth rate estimates from three sources: Zacks, SNL, and Reuters. All such projections were available on October 30, 2012, and all were reported online.

[8] *The Value Line Investment Survey*, August 24, September 21, and November 2, 2012.

[9] *See, e.g.,* David Gordon, Myron Gordon, and Lawrence Gould, "Choice Among Methods of Estimating Share Yield," *The Journal of Portfolio Management*, Spring 1989.

Each consensus growth rate projection is based on a survey of security analysts. It is problematic as to whether any particular analyst's forecast is more representative of general market expectations. The consensus estimate is a simple arithmetic average, or mean, of surveyed analysts' earnings growth forecasts. A simple average of the growth forecasts gives equal weight to all surveyed analysts' projections. Therefore, a simple average, or arithmetic mean, of analyst forecasts is a good proxy for market consensus expectations.

Q WHAT ARE THE GROWTH RATES YOU USED IN YOUR CONSTANT GROWTH DCF MODEL?

A The growth rates I used in my DCF analysis are shown in Schedule MPG-3. The average growth rate for my proxy group is 5.44%.

Q WHAT ARE THE RESULTS OF YOUR CONSTANT GROWTH DCF MODEL?

A As shown in Schedule MPG-4, the average and median constant growth DCF returns for my proxy group are 9.66% and 9.21%, respectively.

Q DO YOU HAVE ANY COMMENTS ON THE RESULTS OF YOUR CONSTANT GROWTH DCF ANALYSIS?

A Yes. The three- to five-year growth rates exceed a sustainable long-term growth rate, as required by the constant growth DCF model.

Q WHY DO YOU BELIEVE THE PROXY GROUP'S THREE- TO FIVE-YEAR GROWTH RATE IS IN EXCESS OF A LONG-TERM SUSTAINABLE GROWTH?

A The three- to five-year growth rate of the proxy group exceeds the growth rate of the overall U.S. economy. As developed below, the consensus of published economists projects that the U.S. Gross Domestic Product ("GDP") will grow at a rate of no more than 5.1% and 4.7% over the next 5 and 10 years, respectively. A company cannot grow, indefinitely, at a faster rate than the market in which it sells its products. Therefore, I have considered alternative DCF models to capture sustainable growth and changing growth outlooks.

Sustainable Growth DCF

Q PLEASE DESCRIBE HOW YOU ESTIMATED A SUSTAINABLE LONG-TERM GROWTH RATE FOR YOUR SUSTAINABLE GROWTH DCF MODEL.

A A sustainable growth rate is based on the percentage of the utility's earnings that is retained and reinvested in utility plant and equipment. These reinvested earnings increase the earnings base (rate base). Earnings grow when plant funded by reinvested earnings is put into service, and the utility is allowed to earn its authorized return on such additional rate base investment.

The internal growth methodology is tied to the percentage of earnings retained in the company and not paid out as dividends. The earnings retention ratio is 1 minus the dividend payout ratio. As the payout ratio declines, the earnings retention ratio increases. An increased earnings retention ratio will fuel stronger growth because the business funds more investments with retained earnings. The payout ratios of the proxy group are shown on my Schedule MPG-5. These dividend payout ratios and earnings retention ratios then can be used to develop a sustainable long-term

earnings retention growth rate. A sustainable long-term retention ratio will help gauge whether analysts' current three- to five-year growth rate projections can be sustained over an indefinite period of time.

The data used to estimate the long-term sustainable growth rate is based on the Company's current market to book ratio and on *Value Line's* three- to five-year projections of earnings, dividends, earned returns on book equity, and stock issuances.

As shown in Schedule MPG-6, page 1, the average sustainable growth rate for the proxy group using this internal growth rate model is 5.23%.

Q WHAT IS THE DCF ESTIMATE USING THESE SUSTAINABLE LONG-TERM GROWTH RATES?

A A DCF estimate based on these sustainable growth rates is developed in Schedule MPG-7. As shown there, a sustainable growth DCF analysis produces proxy group average and median DCF results of 9.44% and 8.92%, respectively.

Multi-Stage Growth DCF Model

Q HAVE YOU CONDUCTED ANY OTHER DCF STUDIES?

A Yes. My first constant growth DCF is based on consensus analysts' growth rate projections, so it is a reasonable reflection of rational investment expectations over the next three to five years. The limitation on the constant growth DCF model is that it cannot reflect a rational expectation that a period of high/low short-term growth can be followed by a change in growth to a rate that is more reflective of long-term sustainable growth. Hence, I performed a multi-stage growth DCF analysis to reflect this outlook of changing growth expectations.

Q WHEN DO YOU BELIEVE SHORT-TERM GROWTH RATES CHANGE OVER TIME?

A Analyst projected growth rates over the next three to five years will change as utility earnings growth outlooks change. Utility companies typically go through cycles in making investments in their systems. When utility companies are making large investments, their rate base grows rapidly, which accelerates their earnings growth. Once a major construction cycle is completed or levels off, growth in the utility rate base slows, and its earnings slow from an abnormally high three- to five-year growth rate period to a lower sustainable growth rate.

As major construction cycles extend over longer periods of time, even with an accelerated construction program, the growth rate of the utility will slow simply because it is adding to a larger rate base, and the utility has limited human and capital resources available to expand its construction program. Hence, the three- to five-year growth rate projection should be used as a long-term sustainable growth rate but not without making a reasonable informed judgment to determine whether it considers the current market environment, the industry, and whether the three- to five-year growth outlook is sustainable.

Q CAN A UTILITY'S ELEVATED THREE- TO FIVE-YEAR GROWTH RATE CONTINUE INDEFINITELY IF ITS CAPITAL PROGRAM CONTINUES OVER AN INDEFINITE PERIOD OF TIME?

A No, because the growth rate will slow over time, even if the utility's capital program remains at an elevated level. This is illustrated in Table 4 below. Consider a hypothetical company with a beginning plant-in-service of $1 million and an elevated capital expenditure program of $100,000 (10% of total capital). Capital expenditures

stay elevated but also grow at the rate of inflation of 2% over the next 10 years. This company has depreciation expense based on a rate of gross plant of 3.0%.

In this example, the first year, the capital expenditures less depreciation expense will grow plant-in-service from $1 million up to $1,070,000—a 7% plant growth. In this example, earnings in the year would begin at an assumed 10% rate of return on investment, or $103,500. This represents a 10% return on average plant investment for the year. Now assume that the capital improvement program continues, and plant-in-service increases from the initial $1 million up to $1,139,900 by the end of year 2. In this second year, earnings would increase to $110,495, a 6.8% growth in earnings relative to year 1. Each year, the embedded plant-in-service increases by capital improvements less depreciation expense. As a result, the growth in earnings slows because a percent change in plant-in-service starts to slow as the beginning of the year plant-in-service number increases. That is, the denominator in the growth equation increases with a relatively flat but elevated level of capital improvements resulting in a decreasing growth in earnings. With this continued level of elevated capital improvement offset by depreciation expense, the growth rate of earnings starts at around 6.8% in the beginning of the growth period, declines to around 5.3% after five years of growth, and further declines to around 4.2% after 10 years of elevated capital investment spending. Hence, while the company maintains an elevated level of capital spending throughout the forecast period, the earnings growth rate nevertheless declines from 6.8% at the beginning of the spending period, down to 4.2% after 10 years of elevated capital spending. Again, this occurs because the denominator in the growth equation increases as plant investment is made and plant-in-service increases. As a result, elevated capital

expenditures have a lower growth impact on a larger capital base after years of elevated capital spending relative to the beginning of the capital spending program.

TABLE 4

Growth in Plant In-Service and Earnings

Year	Beginning of Year Plant-in-Service (1)	Capital Improvement (2)	Depreciation Expense (3)	End of Year Plant-in-Service (4)	Avg Year Plant (5)	ROE (6)	Earnings (7)	Annual Earnings Growth Rate (8)
0	$1,000,000	$100,000	$30,000	$1,070,000	$1,035,000	10.0%	$103,500	
1	$1,070,000	$102,000	$32,100	$1,139,900	$1,104,950	10.0%	$110,495	6.8%
2	$1,139,900	$104,040	$34,197	$1,209,743	$1,174,822	10.0%	$117,482	6.3%
3	$1,209,743	$106,121	$36,292	$1,279,572	$1,244,657	10.0%	$124,466	5.9%
4	$1,279,572	$108,243	$38,387	$1,349,428	$1,314,500	10.0%	$131,450	5.6%
5	$1,349,428	$110,408	$40,483	$1,419,353	$1,384,390	10.0%	$138,439	5.3%
6	$1,419,353	$112,616	$42,581	$1,489,388	$1,454,371	10.0%	$145,437	5.1%
7	$1,489,388	$114,869	$44,682	$1,559,575	$1,524,482	10.0%	$152,448	4.8%
8	$1,559,575	$117,166	$46,787	$1,629,954	$1,594,765	10.0%	$159,476	4.6%
9	$1,629,954	$119,509	$48,899	$1,700,565	$1,665,259	10.0%	$166,526	4.4%
10	$1,700,565	$121,899	$51,017	$1,771,447	$1,736,006	10.0%	$173,601	4.2%

Notes:
Column 2: Escalation Rate 2.00%.
Column 3: Depr Rate 3.00%.
Column 4 = Column 1 plus Column 2 less Column 3.
Column 5 = (Column 1 + Column 4)/2.
Column 7 = Column 5 * Column 6.
Column 8 = Column 7 N ÷ Column 7 N-1 (N is the Year) less 1.

Q IS THE USE OF A MULTI-STAGE DCF MODEL SUPPORTED IN ACADEMIC AND INDUSTRY LITERATURE?

A Yes. In his book *New Regulatory Finance*, Dr. Roger Morin states the following:

> Dividends need not be, and probably are not, constant from period to period. Moreover, there are circumstances where the standard DCF model cannot be used to assess investor return requirements. For example, if a utility company is in the process of altering its dividend payout policy and dividends are not expected to grow at the same rate as earnings during the transition period, the standard DCF model is inapplicable. This is because the expected growth in stock price has

to be different from that of dividends, earnings, and book value if the market price is to converge toward book value.

* * *

A Non-Constant Growth DCF model is appropriate whenever the growth rate is expected to change, and the only way to produce a change in the forecast payout ratio is by introducing an intermediate growth rate that is different from the long-term growth rate, as in the previous example.[10]

Q PLEASE DESCRIBE YOUR MULTI-STAGE GROWTH DCF MODEL.

A The multi-stage growth DCF model reflects the possibility of non-constant growth for a company over time. The multi-stage growth DCF model reflects three growth periods: (1) a short-term growth period, which consists of the first five years; (2) a transition period, which consists of the next five years (6 through 10); and (3) a long-term growth period, starting in year 11 through perpetuity.

For the short-term growth period, I relied on the consensus analysts' growth projections described above in relationship to my constant growth DCF model. For the transition period, the growth rates were reduced or increased by an equal factor, which reflects the difference between the analysts' growth rates and the U.S. GDP growth rate. For the long-term growth period, I assumed each company's growth would converge to the maximum sustainable growth rate for a utility company as proxied by the consensus analysts' projected growth for the U.S. GDP of 4.9%.

[10] *New Regulatory Finance*, Roger A. Morin, PhD, 2006 Public Utilities Reports, Inc., Vienna, Virginia, pp. 264 and 267.

Q WHY IS THE GDP GROWTH PROJECTION A REASONABLE PROXY FOR THE MAXIMUM SUSTAINABLE GROWTH RATE FOR A UTILITY?

A Utilities cannot indefinitely sustain a growth rate that exceeds the growth rate of the overall economy. Utilities' earnings/dividend growth is created by increased utility investment or rate base. Such investment, in turn, is driven by service area economic growth and demand for utility service. In other words, utilities invest in plant to meet sales demand growth, and sales growth, in turn, is tied to economic growth in their service areas. The Energy Information Administration ("EIA") has observed that utility sales growth is less than U.S. GDP growth, as shown in Schedule MPG-8. Utility sales growth has lagged behind GDP growth for more than a decade. As a result, nominal GDP growth is a very conservative, albeit overstated, proxy for electric utility sales growth, rate base growth, and earnings growth. Therefore, GDP growth is a conservative proxy for the highest sustainable long-term growth rate of a utility.

Q IS THERE RESEARCH THAT SUPPORTS YOUR POSITION THAT, OVER THE LONG TERM, A COMPANY'S EARNINGS AND DIVIDENDS CANNOT GROW AT A RATE GREATER THAN THE GROWTH OF THE U.S. GDP?

A Yes. This concept is supported in both published analyst literature and academic work. Specifically, in a textbook entitled "Fundamentals of Financial Management," published by Eugene Brigham and Joel F. Houston, the authors state as follows:

> The constant growth model is most appropriate for mature companies with a stable history of growth and stable future expectations. Expected growth rates vary somewhat among companies, but dividends for mature firms are often expected to grow in the future at about the same rate as nominal gross domestic product (real GDP plus inflation).[11]

[11] "Fundamentals of Financial Management," Eugene F. Brigham and Joel F. Houston, Eleventh Edition 2007, Thomson South-Western, a Division of Thomson Corporation at 298.

Q HOW DID YOU DETERMINE A SUSTAINABLE LONG-TERM GROWTH RATE THAT REFLECTS THE CONSENSUS OF THE MARKET?

A I relied on the consensus analysts' projections of long-term GDP growth. *The Blue Chip Financial Forecasts* publishes consensus economists' GDP growth projections twice a year. These consensus analysts' GDP growth outlooks are the best available measure of the market's assessment of long-term GDP growth. These analyst projections reflect all current outlooks for GDP, as reflected in analyst projections, and are likely the most influential on investors' expectations of future growth outlooks. The consensus economists' published GDP growth rate outlook is 5.1% to 4.7% over the next 10 years.[12]

Therefore, I propose to use the consensus economists' projected 5- and 10-year average GDP consensus growth rate of 4.9%, as published by *Blue Chip Financial Forecasts,* as an estimate of long-term sustainable growth. *Blue Chip Financial Forecasts'* projections provide real GDP growth projections of 2.9% and 2.5%, and GDP inflation of 2.1% and 2.1%[13] over the 5-year and 10-year projection periods, respectively. This consensus GDP growth forecast represents the most likely views of market participants because it is based on published consensus economist projections.

Q DO YOU CONSIDER OTHER SOURCES OF PROJECTED LONG-TERM GDP GROWTH?

A Yes, and these sources corroborate my consensus analysts' projections. The U.S. EIA in its Annual Energy Outlook projects real GDP out until 2035. In its 2012 Annual

[12] *Blue Chip Economic Indicators*, October 10, 2012 at 15.
[13] GDP growth is the product of real and inflation GDP growth.

Report, the EIA projects real GDP through 2035 to be in the range of 2.0% to 3.0%, with a midpoint or reference case of 2.5%.[14]

Also, the Congressional Budget Office ("CBO") makes long-term economic projections. The CBO is projecting real GDP growth of 3.3% to 2.4% during the next 5 and 10 years, respectively, with GDP price inflation of 1.9% to 2.0%.[15] The CBO's real GDP projections are higher than the consensus, but its GDP inflation is lower than the consensus economists.

The real GDP and nominal GDP growth projections made by the U.S. EIA and those made by the CBO support the use of the consensus analyst 5-year and 10-year projected GDP growth outlooks as a reasonable market assessment of long-term prospective GDP growth.

Q WHAT STOCK PRICE, DIVIDEND, AND GROWTH RATES DID YOU USE IN YOUR MULTI-STAGE GROWTH DCF ANALYSIS?

A I relied on the same 13-week stock price and the most recent quarterly dividend payment data discussed above. For stage one growth, I used the consensus analysts' growth rate projections discussed above in my constant growth DCF model. The transition period begins in year 6 and ends in year 10. For the long-term sustainable growth rate starting in year 11, I used 4.9%, the average of the consensus economists' 5-year and 10-year projected nominal GDP growth rates.

Q WHAT ARE THE RESULTS OF YOUR MULTI-STAGE GROWTH DCF MODEL?

A As shown in Schedule MPG-9, the average and median DCF returns on equity for my proxy group are 9.23% and 9.14%, respectively.

[14] *DOE/EIA Annual Energy Outlook 2012 With Projections to 2035*, June 2012 at 70.
[15] *CBO: The Budget and Economic Outlook: Fiscal Years 2012 to 2022*, January 2012 at 128.

Q PLEASE SUMMARIZE THE RESULTS FROM YOUR DCF ANALYSES.

A The results from my DCF analyses are summarized in Table 5 below:

TABLE 5

Summary of DCF Results

Description	Estimates
Constant Growth DCF Model (Analysts' Growth)	9.66%
Constant Growth DCF Model (Sustainable Growth)	9.44%
Multi-Stage Growth DCF Model	9.23%
Average	9.44%

I conclude that a reasonable DCF return for Empire in this case is approximately 9.44%, rounded to 9.45%.

Risk Premium Model

Q PLEASE DESCRIBE YOUR BOND YIELD PLUS RISK PREMIUM MODEL.

A This model is based on the principle that investors require a higher return to assume greater risk. Investors expect that common equity investments have greater risk than bonds because bonds have more security of payment in bankruptcy proceedings than common equity and the coupon payments on bonds represent contractual obligations. In contrast, companies are not required to pay dividends or guarantee returns on common equity investments. Therefore, common equity securities are considered to be more risky than bond securities.

This risk premium model is based on two estimates of an equity risk premium. First, I estimated the difference between the required return on utility common equity investments and U.S. Treasury bonds. The difference between the required return on common equity and the Treasury bond yield is the risk premium. I estimated the risk

premium on an annual basis for each year over the period 1986 through September 2012. The common equity required returns were based on regulatory commission-authorized returns for electric utility companies. Authorized returns are typically based on expert witnesses' estimates of the contemporary investor-required return.

The second equity risk premium estimate is based on the difference between regulatory commission-authorized returns on common equity and contemporary "A" rated utility bond yields. I selected the period 1986 through September 2012 because public utility stocks consistently traded at a premium to book value during that period. This is illustrated in Schedule MPG-10, which shows that the market to book ratio since 1986 for the electric utility industry was consistently above 1.0. Over this period, regulatory authorized returns were sufficient to support market prices that at least exceeded book value. This is an indication that regulatory authorized returns on common equity supported a utility's ability to issue additional common stock without diluting existing shares. It further demonstrates that utilities were able to access equity markets without a detrimental impact on current shareholders.

Based on this analysis, as shown in Schedule MPG-11, the average indicated equity risk premium over U.S. Treasury bond yields has been 5.30%. Of the 27 observations, 21 indicated risk premiums fall in the range of 4.41% to 6.18%. Since the risk premium can vary depending upon market conditions and changing investor risk perceptions, I believe using an estimated range of risk premiums provides the best method to measure the current return on common equity using this methodology.

As shown in Schedule MPG-12, the average indicated equity risk premium over contemporary Moody's utility bond yields was 3.89% over the period 1986

through September 2012. The indicated equity risk premium estimates based on this analysis primarily fall in the range of 3.03% to 4.88% over this time period.

Q DO YOU BELIEVE THAT THESE EQUITY RISK PREMIUM ESTIMATES ARE BASED ON A TIME PERIOD THAT IS TOO LONG OR TOO SHORT TO DRAW ACCURATE CONCLUSIONS CONCERNING CONTEMPORARY MARKET CONDITIONS?

A No. Contemporary market conditions can change dramatically during the period that rates determined in this proceeding will be in effect. A relatively long period of time where stock valuations reflect premiums to book value is an indication that the authorized returns on equity and the corresponding equity risk premiums were supportive of investors' return expectations and provided utilities access to the equity markets under reasonable terms and conditions. Further, this time period is long enough to smooth abnormal market movement that might distort equity risk premiums. While market conditions and risk premiums do vary over time, this historical time period is a reasonable period to estimate contemporary risk premiums.

The time period I use in this risk premium study is a generally accepted period to develop a risk premium study using "expectational" data. Conversely, studies have recommended that use of "actual achieved return data" should be based on very long historical time periods. The studies find that achieved returns over short time periods may not reflect investors' expected returns due to unexpected and abnormal stock price performance. However, these short-term abnormal actual returns would be smoothed over time and the achieved actual returns over long time periods would approximate investors' expected returns. Therefore, it is reasonable to assume that

averages of annual achieved returns over long time periods will generally converge on the investors' expected returns.

My risk premium study is based on expectational data, not actual returns, and, thus, need not encompass very long time periods.

Q BASED ON HISTORICAL DATA, WHAT RISK PREMIUM HAVE YOU USED TO ESTIMATE EMPIRE'S COST OF COMMON EQUITY IN THIS PROCEEDING?

A The equity risk premium should reflect the relative market perception of risk in the utility industry today. I have gauged investor perceptions in utility risk today in Schedule MPG-13. On that schedule, I show the yield spread between utility bonds and Treasury bonds over the last 31 years and the first nine months of 2012. As shown in this schedule, the 2011 utility bond yield spreads over Treasury bonds for "A" rated and "Baa" rated utility bonds are 1.13% and 1.65%, respectively. The utility bond yield spreads over Treasury bonds for "A" and "Baa" rated utility bonds for the first nine months of 2012 are 1.26% and 1.99%, respectively. The current nine-month average "A" rated utility bond yield spread over Treasury bond yields is now lower than the 32-year average spreads of 1.57%. However, the "Baa" rated utility spread of 1.99% is slightly higher, even though comparable to the 32-year average spread of 1.98%.

A current 13-week average "A" rated utility bond yield of 3.99%, when compared to the current Treasury bond yield of 2.85% as shown in Schedule MPG-14, page 1 implies a yield spread of around 1.14%. This current utility bond yield spread is lower than the 32-year average spread for "A" utility bonds of 1.57%. The current spread for the "Baa" utility yields of 1.81% is again lower than the 32-year average spread of 1.98%.

These utility bond yield spreads are clear evidence that the market considers the utility industry to be a relatively low risk investment and demonstrates that utilities continue to have strong access to capital.

Q HOW DID YOU ESTIMATE EMPIRE'S COST OF COMMON EQUITY WITH THIS RISK PREMIUM MODEL?

A I added a projected long-term Treasury bond yield to my estimated equity risk premium over Treasury yields. The 13-week average 30-year Treasury bond yield, ending August 10, 2012 was 2.85%, as shown in Schedule MPG-14, page 1. *Blue Chip Financial Forecasts* projects the 30-year Treasury bond yield to be 3.40%, and a 10-year Treasury bond yield to be 2.30%.[16] Using the projected 30-year bond yield of 3.40%, and a Treasury bond risk premium of 4.41% to 6.18%, as developed above, produces an estimated common equity return in the range of 7.81% (3.40% + 4.41%) to 9.58% (3.40% + 6.18%). I recommend an equity risk premium of 9.58%. I believe this is appropriate given the unusually large yield spreads between Treasury bond and utility bond yields.

I next added my equity risk premium over utility bond yields to a current 13-week average yield on "Baa" rated utility bonds for the period ending October 26, 2012 of 4.66%. Adding the utility equity risk premium of 3.03% to 4.88%, as developed above, to a "Baa" rated bond yield of 4.66%, produces a cost of equity in the range of 7.69% (4.66% + 3.03%) to 9.54% (4.66% + 4.88%). Again, recognizing the unusually wide Treasury to utility bond yield spreads, I recommend a risk premium of 9.54%.

[16] *Blue Chip Financial Forecasts*, November 1, 2012 at 2.

My risk premium analyses produce a return estimate in the range of 9.58% to 9.54%, with a midpoint of 9.56%, rounded to 9.55%.

Capital Asset Pricing Model ("CAPM")

Q PLEASE DESCRIBE THE CAPM.

A The CAPM method of analysis is based upon the theory that the market-required rate of return for a security is equal to the risk-free rate, plus a risk premium associated with the specific security. This relationship between risk and return can be expressed mathematically as follows:

$R_i = R_f + B_i \times (R_m - R_f)$ where:

R_i = Required return for stock i
R_f = Risk-free rate
R_m = Expected return for the market portfolio
B_i = Beta - Measure of the risk for stock

The stock-specific risk term in the above equation is beta. Beta represents the investment risk that cannot be diversified away when the security is held in a diversified portfolio. When stocks are held in a diversified portfolio, firm-specific risks can be eliminated by balancing the portfolio with securities that react in the opposite direction to firm-specific risk factors (e.g., business cycle, competition, product mix, and production limitations).

The risks that cannot be eliminated when held in a diversified portfolio are non-diversifiable risks. Non-diversifiable risks are related to the market in general and are referred to as systematic risks. Risks that can be eliminated by diversification are regarded as non-systematic risks. In a broad sense, systematic risks are market risks, and non-systematic risks are business risks. The CAPM theory suggests that the market will not compensate investors for assuming risks that can be diversified

away. Therefore, the only risk that investors will be compensated for are systematic or non-diversifiable risks. The beta is a measure of the systematic or non-diversifiable risks.

Q PLEASE DESCRIBE THE INPUTS TO YOUR CAPM.

A The CAPM requires an estimate of the market risk-free rate, the company's beta, and the market risk premium.

Q WHAT DID YOU USE AS AN ESTIMATE OF THE MARKET RISK-FREE RATE?

A As previously noted, *Blue Chip Financial Forecasts*' projected 30-year Treasury bond yield is 3.40%.[17] The current 30-year Treasury bond yield is 2.85%, as shown in Schedule MPG-14, page 1. I used *Blue Chip Financial Forecasts*' projected 30-year Treasury bond yield of 3.40% for my CAPM analysis.

Q WHY DID YOU USE LONG-TERM TREASURY BOND YIELDS AS AN ESTIMATE OF THE RISK-FREE RATE?

A Treasury securities are backed by the full faith and credit of the United States government, so long-term Treasury bonds are considered to have negligible credit risk. Also, long-term Treasury bonds have an investment horizon similar to that of common stock. As a result, investor-anticipated long-run inflation expectations are reflected in both common-stock required returns and long-term bond yields. Therefore, the nominal risk-free rate (or expected inflation rate and real risk-free rate) included in a long-term bond yield is a reasonable estimate of the nominal risk-free rate included in common stock returns.

[17] *Id*.

Treasury bond yields, however, do include risk premiums related to unanticipated future inflation and interest rates. A Treasury bond yield is not a risk-free rate. Risk premiums related to unanticipated inflation and interest rates are systematic or market risks. Consequently, for companies with betas less than 1.0, using the Treasury bond yield as a proxy for the risk-free rate in the CAPM analysis can produce an overstated estimate of the CAPM return.

Q WHAT BETA DID YOU USE IN YOUR ANALYSIS?

A As shown in Schedule MPG-15, the proxy group average *Value Line* beta estimate is 0.73.

Q HOW DID YOU DERIVE YOUR MARKET RISK PREMIUM ESTIMATE?

A I derived two market risk premium estimates, a forward-looking estimate and one based on a long-term historical average.

The forward-looking estimate was derived by estimating the expected return on the market (as represented by the S&P 500) and subtracting the risk-free rate from this estimate. I estimated the expected return on the S&P 500 by adding an expected inflation rate to the long-term historical arithmetic average real return on the market. The real return on the market represents the achieved return above the rate of inflation.

Morningstar's *Stocks, Bonds, Bills and Inflation 2012 Classic Yearbook* publication estimates the historical arithmetic average real market return over the period 1926 to 2011 as 8.6%.[18] A current consensus analysts' inflation projection, as

[18] *Morningstar, Inc. Ibbotson SBBI 2012 Classic Yearbook* at 84.

measured by the Consumer Price Index, is 2.2%.[19] Using these estimates, the expected market return is 10.99%.[20] The market risk premium then is the difference between the 10.99% expected market return, and my 3.40% risk-free rate estimate, or approximately 7.60%.

The historical estimate of the market risk premium was also estimated by Morningstar in *Stocks, Bonds, Bills and Inflation 2012 Classic Yearbook*. Over the period 1926 through 2011, Morningstar's study estimated that the arithmetic average of the achieved total return on the S&P 500 was 11.8%,[21] and the total return on long-term Treasury bonds was 6.1%.[22] The indicated market risk premium is 5.7% (11.8% - 6.1% = 5.7%). The average of my market risk premium estimates is 6.7% (7.6% to 5.7%).

Q HOW DOES YOUR ESTIMATED MARKET RISK PREMIUM RANGE COMPARE TO THAT ESTIMATED BY MORNINGSTAR?

A Morningstar's analysis indicates that a market risk premium falls somewhere in the range of 5.9% to 6.6%. My market risk premium falls in the range of 5.7% to 7.6%. My average market risk premium of 6.7% is toward the high end of Morningstar's range.

Morningstar estimates a forward-looking market risk premium based on actual achieved data from the historical period of 1926 through 2011. Using this data, Morningstar estimates a market risk premium derived from the total return on large company stocks (S&P 500), less the income return on Treasury bonds. The total return includes capital appreciation, dividend or coupon reinvestment returns, and

[19] *Blue Chip Financial Forecasts*, November 1, 2012 at 2.
[20] { [(1 + 0.086) ∗ (1 + 0.022)] – 1 } ∗ 100.
[21] *Morningstar, Inc. Ibbotson SBBI 2012 Classic Yearbook* at 83.
[22] *Id*.

annual yields received from coupons and/or dividend payments. The income return, in contrast, only reflects the income return received from dividend payments or coupon yields. Morningstar argues that the income return is the only true risk-free rate associated with Treasury bonds and is the best approximation of a truly risk-free rate. I disagree with this assessment from Morningstar, because it does not reflect a true investment option available to the marketplace and therefore does not produce a legitimate estimate of the expected premium of investing in the stock market versus that of Treasury bonds. Nevertheless, I will use Morningstar's conclusion to show the reasonableness of my market risk premium estimates.

Morningstar's range is based on several methodologies. First, Morningstar estimates a market risk premium of 6.6% based on the difference between the total market return on common stocks (S&P 500) less the income return on Treasury bond investments. Second, Morningstar found that if the New York Stock Exchange (the "NYSE") was used as the market index rather than the S&P 500, that the market risk premium would be 6.4%, not 6.6%. Third, if only the two deciles of the largest companies included in the NYSE were considered, the market risk premium would be 5.9%.[23]

Finally, Morningstar found that the 6.6% market risk premium based on the S&P 500 was influenced by an abnormal expansion of price-to-earnings ("P/E") ratios relative to earnings and dividend growth during the period 1980 through 2001. Morningstar believes this abnormal P/E expansion is not sustainable. Therefore, Morningstar adjusted this market risk premium estimate to normalize the growth in the P/E ratio to be more in line with the growth in dividends and earnings. Based on this

[23]Morningstar observes that the S&P 500 and the NYSE Decile 1-2 are both large capitalization benchmarks. *Morningstar, Inc. Ibbotson SBBI 2012 Valuation Yearbook* at 54.

alternative methodology, Morningstar published a long-horizon supply-side market risk premium of 6.1%.[24]

Q WHAT ARE THE RESULTS OF YOUR CAPM ANALYSIS?

A As shown in Schedule MPG-16, based on my high-end market risk premium of 6.7%, a risk-free rate of 3.40%, and a beta of 0.73, my CAPM analysis produces a return of 8.29% (rounded to 8.30%).

Return on Equity Summary

Q BASED ON THE RESULTS OF YOUR RETURN ON COMMON EQUITY ANALYSES DESCRIBED ABOVE, WHAT RETURN ON COMMON EQUITY DO YOU RECOMMEND FOR EMPIRE?

A Based on my analyses, I estimate Empire's current market cost of equity to be 9.50%.

TABLE 6

Return on Common Equity Summary

Description	Results
DCF	9.45%
Risk Premium	9.55%
CAPM	8.30%

My recommended return on equity is at the midpoint of my recommended range of 9.45% to 9.55%. The high-end is based on my Risk Premium estimate, and low-end is based on my DCF study.

[24] *Id*. at 66.

Financial Integrity

Q WILL YOUR RECOMMENDED OVERALL RATE OF RETURN SUPPORT AN INVESTMENT GRADE BOND RATING FOR EMPIRE?

A Yes. I have reached this conclusion by comparing the key credit rating financial ratios for Empire's retail cost of service in this case, adjusted for my proposed return on equity and my proposed capital structure, to S&P's benchmark financial ratios using S&P's new credit metric ranges.

Q PLEASE DESCRIBE THE MOST RECENT S&P FINANCIAL RATIO CREDIT METRIC METHODOLOGY.

A S&P publishes a matrix of financial ratios that correspond to its assessment of the business risk of the utility company and related bond rating. On May 27, 2009, S&P expanded its matrix criteria[25] by including additional business and financial risk categories. Based on S&P's most recent credit matrix, the business risk profile categories are "Excellent," "Strong," "Satisfactory," "Fair," "Weak," and "Vulnerable." Most electric utilities have a business risk profile of "Excellent" or "Strong." The financial risk profile categories are "Minimal," "Modest," "Intermediate," "Significant," "Aggressive," and "Highly Leveraged." Most of the electric utilities have a financial risk profile of "Aggressive." Empire has an "Excellent" business risk profile and an "Aggressive" financial risk profile.[26]

[25]S&P updated its original 2007 credit metric guidelines in 2009, and incorporated utility metric benchmarks with the general corporate rating metrics. *Standard & Poor's*: "Criteria Methodology: Business Risk/Financial Risk Matrix Expanded" at 2, May 27, 2009.

[26]*Standard & Poor's RatingsDirect on the Global Credit Portal*: "Empire District Electric Co.," March 13, 2012 at 2 (emphasis added).

Q PLEASE DESCRIBE S&P'S USE OF THE FINANCIAL BENCHMARK RATIOS IN ITS CREDIT RATING REVIEW.

A S&P evaluates a utility's credit rating based on an assessment of its financial and business risks. A combination of financial and business risks equates to the overall assessment of Empire's total credit risk exposure. S&P publishes a matrix of financial ratios that defines the level of financial risk as a function of the level of business risk.

S&P publishes ranges for three primary financial ratios that it uses as guidance in its credit review for utility companies. The three primary financial ratio benchmarks it relies on in its credit rating process include: (1) Total Debt to Total Capital; (2) Debt to Earnings Before Interest, Taxes, Depreciation and Amortization ("EBITDA"); and (3) Funds From Operations ("FFO") to Total Debt.[27]

Q HOW DID YOU APPLY S&P'S FINANCIAL RATIOS TO TEST THE REASONABLENESS OF YOUR RATE OF RETURN RECOMMENDATIONS?

A I calculated each of S&P's financial ratios based on Empire's cost of service for its Missouri jurisdictional electric operations. While S&P would normally look at total consolidated Empire financial ratios in its credit review process, my investigation in this proceeding is not the same as S&P's. I am attempting to judge the reasonableness of my proposed cost of capital for rate-setting in Empire's regulated utility operations. Hence, I am attempting to determine whether my proposed rate of return will in turn support cash flow metrics, balance sheet strength, and earnings that will support an investment grade bond rating and Empire's financial integrity.

[27] *Id*. at 4.

Q DID YOU INCLUDE ANY OFF-BALANCE SHEET DEBT ("OBSD")?

A Yes. As shown in Schedule MPG-17, page 4, the Company estimated off-balance sheet debt equivalents of $50.8 million attributed to Empire's operating leases and purchase power agreements, based on S&P's report as of March 23, 2012. S&P includes other off-balance sheet debt adjustments which I did not include in my analysis. Post-retirement benefit obligations and asset retirement obligations were not included in my analysis. These factors are either reflected in Empire's cost of service, or I could not find evidence that they relate to regulated utility operations. As such, I did not include them in the metrics to judge the reasonableness of my rate of return for retail operations in Missouri in this proceeding.

Q PLEASE DESCRIBE THE RESULTS OF THIS CREDIT METRIC ANALYSIS FOR EMPIRE AT A 9.50% RETURN ON EQUITY AND YOUR PROPOSED CAPITAL STRUCTURE.

A The S&P financial metric calculations for Empire at a 9.50% return are developed on Schedule MPG-17, page 1.

Empire's adjusted total debt ratio is approximately 53%. This is within the "Aggressive" utility guideline range of 50% to 60%. This total debt ratio will support an investment grade bond rating.

As shown on Schedule MPG-17, page 1, column 1, based on an equity return of 9.50%, Empire will be provided an opportunity to produce a debt to EBITDA ratio of 3.2x. This is within S&P's "Significant" range of 3.0x to 4.0x. This ratio also supports an investment grade credit rating.

Finally, Empire's retail operations FFO to total debt coverage at a 9.50% equity return and my recommended capital structure would be 25%, which is within

the "Significant" metric guideline range of 20% to 30%. The FFO/total debt ratio will support an investment grade bond rating.

At my recommended return on equity of 9.50% and my recommended capital structure, Empire's financial credit metrics are supportive of an investment grade bond rating.

RESPONSE TO EMPIRE WITNESS DR. JAMES VANDER WEIDE

Q WHAT IS EMPIRE'S RETURN ON EQUITY RECOMMENDATION?

A Empire's rate of return witness, Dr. Vander Weide, recommends a return on equity of 10.6%.

Q HOW DID DR. VANDER WEIDE DEVELOP HIS RETURN ON EQUITY RANGE?

A Dr. Vander Weide developed his return on equity recommendation by applying the DCF, Risk Premium and CAPM models to a utility proxy group. Dr. Vander Weide arrived at his recommendations by reviewing Empire's business operations, market conditions, and utility industry trends at the time of his filing.

Q PLEASE SUMMARIZE DR. VANDER WEIDE'S PROPOSED RETURN ON EQUITY FOR EMPIRE.

A As shown below in Table 7, his analyses produce an average return on equity of 10.6%, without his CAPM return estimates, and a range of 9.5% to 10.9%, including all of his results. However, as I demonstrate below, Dr. Vander Weide's DCF and RP studies produce a return on equity for Empire no higher than 9.7%.

TABLE 7

Empire's ROE Analysis

Model	Vander Weide Proposed	Adjusted
Constant Growth DCF	10.2%	9.5%
Multi-Stage Growth DCF	9.5% - 10.6%	9.5%
Ex Ante Risk Premium	10.9%	8.0%
Ex Post Risk Premium	10.6%	8.3%
CAPM Historical (MRP)	9.5%	9.5%
CAPM DCF (MRP)	10.6%	Reject
Recommendation	10.6%	9.5%

Source: Vander Weide Direct at 50, 55 and 56, and Schedule JWV-2.

Q PLEASE DESCRIBE DR. VANDER WEIDE'S DCF ANALYSIS.

A Dr. Vander Weide applied the traditional DCF model to a utility proxy group. Based on his utility group, his DCF study produces a return on equity of 10.2%. (Vander Weide Direct at 35 and Schedule JWV-1). Dr. Vander Weide also developed a three-stage DCF model, which produced a return on equity in the range of 9.5% to 10.6%, with a midpoint of 10.1% (Vander Weide Direct at 37 and Schedule JVW-2).

Q DO YOU TAKE ISSUE WITH DR. VANDER WEIDE'S DCF ANALYSES?

A Yes. I have several major issues concerning his DCF analyses. Dr. Vander Weide's constant growth DCF result is subject to a significant outlier and should be revised to reflect the median return for his proxy group. Second, Dr. Vander Weide's constant growth DCF study is overstated because the analysts' three- to five-year growth rates he uses are not reasonable estimates of long-term sustainable growth. The constant

growth DCF model used by Dr. Vander Weide requires an estimated long-term sustainable growth. In contrast, the analysts' growth rates he relies on reflect only the outlooks over the next three to five years. To the extent the analysts' growth rate estimates are not reasonable estimates of long-term sustainable growth, then the DCF return estimate he produces from this study is not reliable. Because the analysts' growth rates exceed a reasonable estimate of long-term sustainable growth, Dr. Vander Weide's DCF return estimate is inflated and should be rejected.

Third, I believe his DCF return estimate is unreasonable because he relies on a quarterly compounding version of the DCF model. For the reasons set forth below, the quarterly compounding of the DCF model overestimates a utility's cost of capital because it provides utilities with an opportunity to earn the dividend reinvestment return twice: first, through authorized returns on equity and earnings to the utility, and a second time after dividends are actually paid to investors and reinvested in alternative investments to the utility stock the dividend was earned upon.

Q WHY DO YOU BELIEVE THAT DR. VANDER WEIDE'S DCF IS OVERSTATED DUE TO OUTLIERS?

A Dr. Vander Weide's constant growth DCF model results are upward biased because it includes an equity return of 17.1% for Hawaiian Electric, which is almost four standard deviations above the proxy group mean. This estimate skews the proxy group average result. The group median result of 9.7% is a better estimate of the central tendency of the group, as shown on Schedule MPG-18, page 1.

Q PLEASE DESCRIBE WHY YOU BELIEVE DR. VANDER WEIDE'S THREE- TO FIVE-YEAR ANALYSTS' GROWTH RATE PROJECTIONS ARE NOT REASONABLE ESTIMATES OF LONG-TERM SUSTAINABLE GROWTH.

A As shown on his Schedule JVW-1, the growth rates from his proxy group in every instance but a few exceed the projected nominal growth of the U.S. GDP. As stated above, consensus economists' projections of long-term growth for the U.S. GDP are around 4.9%. In contrast, of Dr. Vander Weide's 24 utility company proxy group, approximately 14 of the companies have growth rate estimates that exceed the long-term projected growth of U.S. GDP. On average, his proxy group growth rate is 5.6%, as shown on my Schedule MPG-18.

I explained above that both practitioners and academics support the notion that long-term sustainable growth cannot be greater than the economy in which the company sells its goods and services. Growth can exceed the service area economic growth over short periods of time, but over the long-term the expectation that the growth will exceed the economy in which it sells its services is not rational nor reasonable. Because Dr. Vander Weide's growth rates exceed the long-term growth DCF model used by Dr. Vander Weide requires an estimated long-term sustainable growth. In contrast, the analysts' growth rates he relies on reflect only the outlooks over the next three to five years. To the extent the analysts' growth rate estimates are not reasonable estimates of long-term sustainable growth, then the DCF return estimate he produces from this study is not reliable. Because the analysts' growth rates exceed a reasonable estimate of long-term sustainable growth, Dr. Vander Weide's DCF return estimate is inflated and should be rejected.

Q WHY IS A QUARTERLY COMPOUNDING ADJUSTMENT TO A DCF RETURN ESTIMATE NOT REASONABLE?

A Including the quarterly compounding adjustment to Empire's authorized return on equity is inappropriate. If a quarterly compounding adjustment is added to a DCF return estimate, shareholders will be permitted to earn the dividend reinvestment return twice: (1) through the higher authorized return on equity, and (2) through actual receipt of dividends and the reinvestment of those dividends throughout the year. This double counting of the dividend reinvestment return is not reasonable and will unjustly inflate Empire's rates.

Q PLEASE EXPLAIN WHY THE QUARTERLY COMPOUNDING RETURN SHOULD NOT BE INCLUDED IN EMPIRE'S AUTHORIZED RETURN ON EQUITY.

A Simply put, the quarterly compounding component of the return is not a cost to the utility. Only the utility's cost of common equity capital should be included in the authorized return on equity.

This issue surrounds whether or not the DCF return estimate should include the expectations by investors that they will receive cash flows within the year, that can be reinvested in other investments of comparable risk, and thus the cash flows will produce compounded returns throughout the year. The relevant issue for setting rates is whether or not that reinvestment return is a cost to the utility. It is not!

The reinvestment return is not a cost to the utility and therefore should not be included in the authorized return on equity. While it is reasonable for investors to expect to have the opportunity to earn the compounded return produced by cash flows received within the year, the compound return is not paid to investors by the utility.

Q CAN YOU PROVIDE AN EXAMPLE OF WHY THE COMPOUNDING RETURN ESTIMATE IS NOT A COST TO THE UTILITY?

A Yes. I will provide two examples to help illustrate this point. First, consider the cost to the utility of an outstanding utility bond. Most utility bonds pay a coupon every six months. The utility annual cost paid to the bond investor is the sum of the two semi-annual coupon payments. A bond investor expects to receive the semi-annual coupon payments from the utility, but also has an opportunity to reinvest the first coupon payment for the remaining six months of the year to enhance his end-of-year return. This compound return component is, however, not a cost to the utility because the utility does not pay the extra return.

For example, assume Empire has an outstanding bond with a face value of $1,000, at an interest rate of 6% which is paid in two semi-annual $30 coupon payments. Empire's cost of this bond is 6%. This 6% cost to Empire is based on a $30 coupon payment paid in month 6 and month 12 for an annual payment of $60 relative to the $1,000 face value of the bond. However, the bond investor would have an annual expected return on this bond of 6.1%. This annual expected return would be realized by receiving the first $30 semi-annual coupon payment from Empire and reinvesting it for the remaining six months of the year. This would produce $0.89 of semi-annual compounding return ($30 x $[(1.06)^{½} - 1]$). Hence, the bond investor would receive $60 from Empire, and $0.89 from investing the first coupon for a total annual return of 6.09%, or 6.1%.

Importantly, if Empire were to recover a 6.1% cost of this bond in its cost of service, and paid that return out to the bond investor, then the bond investor would receive $60.89 from Empire, rather than the $60.00 actual cost, but the bond investor could still reinvest the semi-annual coupon, now $30.89 for the remaining six months

of the year. This would provide the investor with the reinvestment return twice, once from utility ratepayers, and a second time after the semi-annual coupon payment was paid and reinvested.

Reflecting this compounding assumption in the authorized return on equity therefore will double count the reinvestment return opportunity.

Q DOES THIS EXAMPLE ALSO APPLY TO UTILITY STOCK INVESTMENTS?

A Yes. Assume now that an investor purchased Empire stock for $100, and expects to receive four quarterly dividends of $1.50, or $6.00 per year. The expected cost to the utility of this dividend payment over the year would be $6.00, or 6.0%. However, the expected effective yield of the dividend to investors would be 6.13% because the quarterly dividends could be reinvested for the remaining term of the year. Hence, the expected end-of-year value of those four $1.50 quarterly dividend payments to the investor would be $6.13.[28] Again, the utility pays $6.00 of annual dividends. The $0.13 is not paid to investors from the utility, but is rather earned in the other investments that earn the same return, which the dividends were invested in throughout the year.

Importantly, the reinvestment return of the dividends is not paid by the utility, and therefore is not part of the utility's cost of capital. Again, if this dividend reinvestment return is included in the utility's authorized return on equity, then investors will receive the dividend reinvestment return twice, once through the authorized return on equity, and a second time when dividends are actually received by investors and reinvested.

[28] $1.5 \times (1.06)^{.75} + 1.5 \times (1.06)^{.5} + 1.5 \times (1.06)^{.25} + 1.5 = \$6.13$.

Q CAN DR. VANDER WEIDE'S DCF ANALYSIS BE USED TO PRODUCE A RELIABLE DCF RETURN FOR EMPIRE IN THIS CASE?

A Yes. Reflecting a period of abnormally high short-term growth, and removing his quarterly compounding assumption, the data used by Dr. Vander Weide in his DCF study can produce a reasonable return estimate for Empire. As shown on my Schedule MPG-18, page 2, revising Dr. Vander Weide's DCF study as described above, produces a proxy group average return of 10.0% and median return of 9.5%. I believe the median return of 9.5% more accurately describes the central tendency of the group, because the average is skewed to the significantly higher results produced by Hawaiian Electric and Pinnacle West Capital. Therefore, correct implementation of Dr. Vander Weide's constant growth DCF analysis produces a fair return on equity for Empire in this case of 9.5%.

Q PLEASE DESCRIBE DR. VANDER WEIDE'S MULTI-STAGE DCF MODEL.

A Dr. Vander Weide developed a three-stage DCF model using his analysts' projected growth rate for the first stage and a GDP growth for the final sustainable growth stage. For the second stage he assumed that the growth will gradually converge to the long-term growth of the economy.

For his third stage Dr. Vander Weide used three estimates: (1) the average actual historical GDP growth for the period 1929-2011 of 6.26%, (2) the EIA's projected GDP growth for the period 2017-2035 of 4.52%, and (3) a GDP growth rate of 5.19% based on the average historical real GDP for the period 1929-2011 of 3.24% and a projected GDP inflation for the period 2017-2035 of 1.96%.

Q DO YOU HAVE ANY ISSUES WITH DR. VANDER WEIDE'S MULTI-STAGE DCF MODEL?

A The primary concern with Dr. Vander Weide's multi-stage DCF analysis is that his long-term steady-state growth rate is not based on consensus analysts' projections of future GDP growth. Indeed, two of the three long-term sustainable growth rates are significantly higher than consensus economists' projections of future GDP growth. Specifically, Dr. Vander Weide's use of EIA's long-term GDP growth projections of 5.19% and his historical GDP growth rate of 6.26% significant exceed consensus analysts' forward-looking GDP growth of 4.9%.

I would also note that Dr. Vander Weide's use of historical data to derive a future GDP growth rate is inconsistent with his own testimony. For example, concerning earnings per share growth, Dr. Vander Weide stated as follows:

> I rely on analysts' projections of future EPS growth rather than historical or retention growth rates because there is considerable empirical evidence that analysts' forecasts are the best estimate of investors' expectation of future long-term growth. (Vander Weide Direct at 31).

Dr. Vander Weide's use of GDP growth rates significantly in excess of consensus analysts' projected long-term GDP growth resulted in an overstatement of his multi-stage growth DCF analysis.

Q CAN DR. VANDER WEIDE'S MULTI-STAGE DCF ANALYSIS BE CORRECTED TO PRODUCE A REASONABLE ESTIMATE FOR EMPIRE?

A Yes. I have reconstructed Dr. Vander Weide's DCF analysis using his 4.52% growth rate and a 4.9% consensus analysts' growth rate estimate. This is developed on my Schedule MPG-18, page 3. As shown on that schedule, using a consensus analysts' GDP growth rate of 4.9%, his proxy group average and median results are 9.7% and

9.5%, respectively. I believe the median estimate of 9.5% more accurately describes the central tendency of the group estimates, because the group average is overstated by an inflated DCF return estimate for Hawaiian Electric. Most of the other estimates within the group fall around the 9.5% estimate. Therefore, like his constant growth DCF study, a multi-stage growth DCF analysis using Dr. Vander Weide's proxy group supports a return on equity for Empire in this case of 9.5%.

Q PLEASE DESCRIBE DR. VANDER WEIDE'S EX ANTE RISK PREMIUM METHODOLOGY.

A Dr. Vander Weide estimated a DCF return on a proxy group of electric companies relative to the utility bond yield with a rating of "A." He performed this analysis for a period from September 1999 through April 2012. Based on this study, Dr. Vander Weide asserts that his risk premium estimate was 4.4% for this historical period based on prospective DCF return estimates relative to bond yields.

To this estimated market risk premium of 4.4%, he added a projected "A" rated Moody's bond utility yield of 6.5%. He then concluded that this produced a return on common equity of 10.9%. (Vander Weide Direct at 41).

Q PLEASE DESCRIBE THE ISSUES YOU HAVE WITH DR. VANDER WEIDE'S EX ANTE RISK PREMIUM ANALYSIS.

A I believe Dr. Vander Weide's estimated market risk premium from his ex ante risk premium study represents a very high-end estimate of an appropriate risk premium for this proceeding. However, because bond yields are relatively low currently, it can be used to produce a reasonable return on equity estimate for Empire. Also, Dr. Vander Weide's projected "A" rated utility yield is highly problematic.

Q WHY DO YOU BELIEVE THAT THE ACCURACY OF FORECASTED INTEREST RATES IS HIGHLY PROBLEMATIC?

A Over the last several years, observable current interest rates have been a more accurate predictor of future interest rates than economists' consensus projections. Schedule MPG-19 illustrates this point. On this schedule, under Columns 1 and 2, I show the actual market yield at the time a projection is made for Treasury bond yields two years in the future. In Column 1, I show the actual Treasury yield and, in Column 2, I show the projected yield two years out.

As shown in Columns 1 and 2, over the last several years, Treasury yields were projected to increase relative to the actual Treasury yields at the time of the projection. In Column 4, I show what the Treasury yield actually turned out to be two years after the forecast. Under Column 5, I show the actual yield change at the time of the projections relative to the projected yield change.

As shown in this schedule, over the last several years, economists consistently have been projecting that interest rates will increase. However, as demonstrated under Column 5, those yield projections have turned out to be overstated in virtually every case. Indeed, actual Treasury yields have decreased or remained flat over the last five years, rather than increase as the economists' projections indicated. As such, current observable interest rates are just as likely to predict future interest rates as are economists' projections.

Q CAN DR. VANDER WEIDE'S EX ANTE RISK PREMIUM STUDY BE REVISED TO PRODUCE A MORE REASONABLE RESULT?

A Yes. Applying his estimate of 4.4% equity risk premium to the current observable "A" rated utility bond yield of 3.99% produces a return on equity of 8.0% for Empire.

Q PLEASE DESCRIBE DR. VANDER WEIDE'S EX POST RISK PREMIUM METHODOLOGY.

A In Dr. Vander Weide's ex post methodology, he compared the historical realized return on the S&P 500 relative to estimated changes in bond price for an "A" rated utility bond. He performed a second ex post risk premium analysis comparing the historical achieved return on the S&P Utility Index, relative again to changes in "A" rated utility bond yields.

Based on this analysis, Dr. Vander Weide estimates an equity risk premium in the range of 3.8% (based on S&P 500) to 4.3% (based on utility yields). He then applies this estimated equity risk premium to his projected "A" rated utility bond yield of 6.5% to produce an estimated equity risk premium in the range of 10.3% to 10.8% with a midpoint of 10.6%. (Vander Weide Direct at 46-47).

Q DO YOU BELIEVE THAT DR. VANDER WEIDE'S EX POST RISK PREMIUM RECOMMENDATION IS REASONABLE?

A No, for several reasons. First, as discussed earlier, his projected "A" rated utility bond yield of 6.5% substantially exceeds current observable utility bond yields of 3.99%. While these bond yields are low, Dr. Vander Weide's projected yield is abnormally high. Reflecting just the high-end of his estimated equity risk premium using his ex post risk premium study of 4.3%, with current bond yields of 4.0%, would indicate a fair return on equity for Empire in this case of 8.3%. Using his low-end estimate of 3.8%, would indicate a return on equity of 7.8%. As such, Dr. Vander Weide's recommended return on equity with this methodology substantially overstates current observable market costs.

Q PLEASE DESCRIBE DR. VANDER WEIDE'S CAPM STUDIES.

A Dr. Vander Weide performed a historical DCF study based on a market risk premium of 6.6%, a risk-free rate of 4.91%, and beta estimate of 0.70. This study produced a return on equity estimate of 9.5%. (Vander Weide Direct at 50). He also performed a DCF-based CAPM study, where he estimated the market risk premium using a DCF return on the S&P 500. Based on that study, Dr. Vander Weide estimated a market risk premium of 8.19%, and use of his risk-free rate of 4.91%, and beta estimate of 0.70, produced a CAPM return estimate of 10.6%. (Vander Weide Direct at 55).

Q DO YOU HAVE ANY COMMENTS CONCERNING DR. VANDER WEIDE'S CAPM ANALYSES?

A Yes. Dr. Vander Weide states that the CAPM analysis should be given little to no weight because it overstates the return estimates when the beta coefficient exceeds 1.0 and understates the results when it is above 1.0. While I agree with this theory when the CAPM is derived from raw betas, this is not the case when analysts utilize adjusted beta as Dr. Vander Weide and I have done.

This deficiency of the CAPM analysis has been well documented in financial literature and many investors' services such as *Value Line* and Bloomberg have estimated adjusted betas. Therefore, Dr. Vander Weide's CAPM results should be taken into consideration for determining a fair return on equity for Empire.

Q DO YOU HAVE ANY CONCERNS WITH DR. VANDER WEIDE'S HISTORICAL CAPM RETURN ESTIMATE?

A No, I do not.

Q DO YOU HAVE ANY CONCERNS WITH DR. VANDER WEIDE'S DCF-BASED CAPM RETURN ESTIMATE?

A Yes. I believe his market risk premium of 8.19% is overstated because it reflects an excessive projected return on the market. Therefore, I believe this CAPM return estimate should be rejected.

Q IS DR. VANDER WEIDE'S DCF-BASED CAPM ESTIMATE REASONABLE?

A No. Dr. Vander Weide's DCF-based CAPM analysis is based on a market risk premium of 8.19%. This market risk premium is significantly higher than the historical market risk premium of 6.6%. Dr. Vander Weide's 13.1% DCF market return used to derive the market risk premium of 8.19% is highly inflated and unreliable. This market return estimate is based on a DCF analysis that includes a growth rate projection of around 10.7% and a dividend yield of 2.4%. Dr. Vander Weide's risk premium is dramatically overstated because it is based on a DCF return produced by irrationally high growth outlooks, and is, therefore, not reliable.

More specifically, it is simply irrational to expect that securities market capital appreciation and growth will be above 10.0% for an indefinite period of time. This is important because the DCF model requires a sustainable long-term growth rate, not simply a growth rate that might be appropriate for the next five years. The growth rate for the overall securities market must reflect the economy in which its companies operate, and the earnings and dividend-paying ability of those companies. Companies produce earnings and dividends by selling goods and services in the marketplace. Hence, companies' earnings growth and sales growth opportunities cannot be substantially in excess of the expected growth in the overall economy. It is simply not a rational expectation to believe that, for an extended period of time, the

growth rate of companies will both exceed the growth of the overall economy in which they sell their goods and services and produce earnings to pay dividends. As I mentioned above, *Blue Chip Financial Forecasts* projects an average 5- to 10-year nominal growth in the GDP, or overall U.S. economy, of 4.9%.[29] Hence, expecting a growth rate of 10.6%, in essence, assumes that the securities market can grow at a rate almost twice that of the overall U.S. economy. This is simply not a rational expectation.

Q DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A Yes, it does.

[29] *Blue Chip Economic Indicators*, October 10, 2012.

Qualifications of Michael P. Gorman

Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A Michael P. Gorman. My business address is 16690 Swingley Ridge Road, Suite 140, Chesterfield, MO 63017.

Q PLEASE STATE YOUR OCCUPATION.

A I am a consultant in the field of public utility regulation and a Managing Principal with Brubaker & Associates, Inc., energy, economic and regulatory consultants.

Q PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND WORK EXPERIENCE.

A In 1983 I received a Bachelors of Science Degree in Electrical Engineering from Southern Illinois University, and in 1986, I received a Masters Degree in Business Administration with a concentration in Finance from the University of Illinois at Springfield. I have also completed several graduate level economics courses.

In August of 1983, I accepted an analyst position with the Illinois Commerce Commission ("ICC"). In this position, I performed a variety of analyses for both formal and informal investigations before the ICC, including: marginal cost of energy, central dispatch, avoided cost of energy, annual system production costs, and working capital. In October of 1986, I was promoted to the position of Senior Analyst. In this position, I assumed the additional responsibilities of technical leader on projects, and my areas of responsibility were expanded to include utility financial modeling and financial analyses.

In 1987, I was promoted to Director of the Financial Analysis Department. In this position, I was responsible for all financial analyses conducted by the Staff. Among other things, I conducted analyses and sponsored testimony before the ICC on rate of return, financial integrity, financial modeling and related issues. I also supervised the development of all Staff analyses and testimony on these same issues. In addition, I supervised the Staff's review and recommendations to the Commission concerning utility plans to issue debt and equity securities.

In August of 1989, I accepted a position with Merrill-Lynch as a financial consultant. After receiving all required securities licenses, I worked with individual investors and small businesses in evaluating and selecting investments suitable to their requirements.

In September of 1990, I accepted a position with Drazen-Brubaker & Associates, Inc. ("DBA"). In April 1995, the firm of Brubaker & Associates, Inc. ("BAI") was formed. It includes most of the former DBA principals and Staff. Since 1990, I have performed various analyses and sponsored testimony on cost of capital, cost/benefits of utility mergers and acquisitions, utility reorganizations, level of operating expenses and rate base, cost of service studies, and analyses relating to industrial jobs and economic development. I also participated in a study used to revise the financial policy for the municipal utility in Kansas City, Kansas.

At BAI, I also have extensive experience working with large energy users to distribute and critically evaluate responses to requests for proposals ("RFPs") for electric, steam, and gas energy supply from competitive energy suppliers. These analyses include the evaluation of gas supply and delivery charges, cogeneration and/or combined cycle unit feasibility studies, and the evaluation of third-party asset/supply management agreements. I have participated in rate cases on rate

design and class cost of service for electric, natural gas, water and wastewater utilities. I have also analyzed commodity pricing indices and forward pricing methods for third party supply agreements, and have also conducted regional electric market price forecasts.

In addition to our main office in St. Louis, the firm also has branch offices in Phoenix, Arizona and Corpus Christi, Texas.

Q HAVE YOU EVER TESTIFIED BEFORE A REGULATORY BODY?

A Yes. I have sponsored testimony on cost of capital, revenue requirements, cost of service and other issues before the Federal Energy Regulatory Commission and numerous state regulatory commissions including: Arkansas, Arizona, California, Colorado, Delaware, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Louisiana, Michigan, Missouri, Montana, New Jersey, New Mexico, New York, North Carolina, Oklahoma, Oregon, South Carolina, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, Wyoming, and before the provincial regulatory boards in Alberta and Nova Scotia, Canada. I have also sponsored testimony before the Board of Public Utilities in Kansas City, Kansas; presented rate setting position reports to the regulatory board of the municipal utility in Austin, Texas, and Salt River Project, Arizona, on behalf of industrial customers; and negotiated rate disputes for industrial customers of the Municipal Electric Authority of Georgia in the LaGrange, Georgia district.

Q PLEASE DESCRIBE ANY PROFESSIONAL REGISTRATIONS OR ORGANIZATIONS TO WHICH YOU BELONG.

A I earned the designation of Chartered Financial Analyst ("CFA") from the CFA Institute. The CFA charter was awarded after successfully completing three examinations which covered the subject areas of financial accounting, economics, fixed income and equity valuation and professional and ethical conduct. I am a member of the CFA Institute's Financial Analyst Society.

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Empire District Electric

Rate of Return
(March 31, 2012)

Line	Description	Amount (1)	Weight (2)	Cost (3)	Weighted Cost (4)
1	Long-Term Debt	$ 669,016,299	51.20%	5.94%	3.04%
2	Common Equity*	637,714,288	48.80%	**9.50%**	4.64%
3	**Total**	**$ 1,306,730,587**	**100.00%**		**7.68%**

Source:
Sager Direct at 3.
* Page 2.

Empire District Electric

Adjusted Capital Structure
(March 31, 2012)

Line	Description	Consolidated Amount[1] (1)	Non-Utility Adjustments (2)	Utility Adjusted Amount (3)
1	Long-Term Debt	$ 669,016,299		$ 669,016,299
2	Common Equity	$ 696,418,294	$ (58,704,006)	$ 637,714,288
3	**Total**	**$ 1,365,434,593**		**$ 1,306,730,587**

Adjustments[2]

(1) Non-Regulated Property

4	Fiber	$ 35,583,919
5	Less: Accumulated Depreciatiion	$ (12,516,132)
6	Construction Work in Progress	$ 809,884
7	**Total**	**$ 23,877,671**
8	Less: Capital Leases	$ (4,665,992)
9	**Total Non-regulated**	**$ 19,211,679**
10	**(2) Goodwill Asset**	**$ 39,492,327**
11	**Total Adjustments**	**$ 58,704,006**

Sources:
[1] Sager Direct at 3.
[2] Response to MEUA Item No. 108.

Empire District Electric

Proxy Group

Line	Company	Credit Ratings[1] S&P (1)	Credit Ratings[1] Moody's (2)	Common Equity Ratios *SNL*[1] (3)	Common Equity Ratios *Value Line*[2] (4)	S&P Business Risk Score[3] (5)
1	American Electric Power	BBB	Baa2	44.1%	49.3%	Excellent
2	CenterPoint Energy	BBB+	Baa3	31.5%	32.8%	Excellent
3	CMS Energy Corp.	BBB-	Ba1	29.3%	32.6%	Excellent
4	Consol. Edison	A-	Baa1	51.2%	52.5%	Excellent
5	Dominion Resources	A-	Baa2	35.3%	39.3%	Excellent
6	DTE Energy	BBB+	Baa2	46.2%	49.4%	Strong
7	FirstEnergy Corp.	BBB-	Baa3	43.3%	45.8%	Strong
8	Great Plains Energy	BBB	Baa3	42.7%	51.6%	Excellent
9	Hawaiian Elec.	BBB-	Baa2	50.6%	53.9%	Strong
10	NextEra Energy	A-	Baa1	39.4%	41.8%	Strong
11	Northeast Utilities	A-	Baa2	42.2%	45.3%	Excellent
12	OGE Energy	BBB+	Baa1	43.9%	48.4%	Strong
13	Pepco Holdings	BBB+	Baa3	46.3%	50.9%	Excellent
14	Pinnacle West Capital	BBB	Baa2	51.5%	55.9%	Excellent
15	PNM Resources	BBB-	Ba1	46.0%	48.1%	Excellent
16	Portland General	BBB	Baa2	48.5%	50.4%	Excellent
17	SCANACorp.	BBB+	Baa3	42.3%	45.7%	Excellent
18	Sempra Energy	BBB+	Baa1	46.3%	49.2%	Strong
19	Southern Co.	A	Baa1	44.1%	47.1%	Excellent
20	TECO Energy	BBB+	Baa2	42.4%	45.8%	Excellent
21	Westar Energy	BBB	Baa2	46.9%	50.0%	Excellent
22	Wisconsin Energy	A-	A3	42.6%	46.0%	Excellent
23	Xcel Energy Inc.	A-	Baa1	45.6%	48.9%	Excellent
24	**Average**	**BBB+**	**Baa2**	**43.6%**	**47.0%**	**Excellent**
25	Empire District Electric	BBB-	Baa2	51.0%[4]		Excellent

Sources:

[1] SNL Financial, Downloaded on November 1, 2012.

[2] *The Value Line Investment Survey,* August 24, September 21, and November 2, 2012.

[3] *S&P RatingsDirect:* "U.S. Regulated Water, Gas, and Electric Utilities, Strongest To Weakest," October 22, 2012.

[4] Sager Direct at 3.

Empire District Electric

Consensus Analysts' Growth Rates

Line	Company	Zacks Estimated Growth %[1] (1)	Zacks Number of Estimates (2)	SNL Estimated Growth %[2] (3)	SNL Number of Estimates (4)	Reuters Estimated Growth %[3] (5)	Reuters Number of Estimates (6)	Average of Growth Rates (7)
1	American Electric Power	3.48%	N/A	3.30%	6	3.36%	5	3.38%
2	CenterPoint Energy	6.04%	N/A	5.80%	4	5.51%	7	5.78%
3	CMS Energy Corp.	5.97%	N/A	6.00%	5	6.23%	6	6.07%
4	Consol. Edison	3.30%	N/A	3.30%	5	3.22%	5	3.27%
5	Dominion Resources	5.03%	N/A	5.00%	4	5.66%	5	5.23%
6	DTE Energy	4.93%	N/A	4.90%	3	4.65%	5	4.83%
7	FirstEnergy Corp.	2.50%	N/A	4.00%	1	4.00%	3	3.50%
8	Great Plains Energy	8.17%	N/A	7.00%	4	8.25%	2	7.81%
9	Hawaiian Elec.	6.22%	N/A	7.20%	5	5.93%	4	6.45%
10	NextEra Enerqy	5.50%	N/A	5.40%	5	5.76%	10	5.55%
11	Northeast Utilities	7.17%	N/A	7.00%	6	5.88%	7	6.68%
12	OGE Energy	5.38%	N/A	5.10%	4	5.30%	4	5.26%
13	Pepco Holdings	5.88%	N/A	6.50%	5	5.62%	4	6.00%
14	Pinnacle West Capital	6.52%	N/A	6.80%	6	5.65%	4	6.32%
15	PNM Resources	9.30%	N/A	13.60%	3	9.04%	5	10.65%
16	Portland General	4.10%	N/A	4.10%	4	4.16%	7	4.12%
17	SCANACorp.	4.65%	N/A	4.60%	4	5.03%	4	4.76%
18	Sempra Enerqy	4.30%	N/A	2.50%	2	6.50%	2	4.43%
19	Southern Co.	5.22%	N/A	5.70%	6	5.28%	6	5.40%
20	TECO Energy	3.67%	N/A	3.00%	5	3.57%	6	3.41%
21	Westar Energy	5.67%	N/A	5.60%	5	5.48%	5	5.58%
22	Wisconsin Energy	5.42%	N/A	5.00%	5	6.86%	5	5.76%
23	Xcel Energy Inc.	4.86%	N/A	5.00%	7	4.86%	8	4.91%
24	**Average**	**5.36%**	**N/A**	**5.50%**	**5**	**5.47%**	**5**	**5.44%**

Sources:

[1] Zacks Elite, http://www.zackselite.com/, downloaded on October 30, 2012.

[2] SNL Interactive, http://www.snl.com/, downloaded on October 30, 2012.

[3] Reuters, http://www.reuters.com/, downloaded on October 30, 2012.

Empire District Electric

Constant Growth DCF Model
(Consensus Analysts' Growth Rates)

Line	Company	13-Week AVG Stock Price[1] (1)	Analysts' Growth[2] (2)	Annualized Dividend[3] (3)	Adjusted Yield (4)	Constant Growth DCF (5)
1	American Electric Power	$43.56	3.38%	$1.88	4.46%	7.84%
2	CenterPoint Energy	$20.98	5.78%	$0.81	4.08%	9.87%
3	CMS Energy Corp.	$23.58	6.07%	$0.96	4.32%	10.39%
4	Consol. Edison	$61.12	3.27%	$2.42	4.09%	7.36%
5	Dominion Resources	$53.29	5.23%	$2.11	4.17%	9.40%
6	DTE Energy	$60.05	4.83%	$2.48	4.33%	9.16%
7	FirstEnergy Corp.	$45.26	3.50%	$2.20	5.03%	8.53%
8	Great Plains Energy	$22.07	7.81%	$0.85	4.15%	11.96%
9	Hawaiian Elec.	$26.99	6.45%	$1.24	4.89%	11.34%
10	NextEra Energy	$69.29	5.55%	$2.40	3.66%	9.21%
11	Northeast Utilities	$38.59	6.68%	$1.37	3.79%	10.48%
12	OGE Energy	$55.28	5.26%	$1.57	2.99%	8.25%
13	Pepco Holdings	$19.39	6.00%	$1.08	5.90%	11.90%
14	Pinnacle West Capital	$52.91	6.32%	$2.18	4.38%	10.70%
15	PNM Resources	$21.04	10.65%	$0.58	3.05%	13.70%
16	Portland General	$27.34	4.12%	$1.08	4.11%	8.23%
17	SCANACorp.	$48.49	4.76%	$1.98	4.28%	9.04%
18	Sempra Energy	$67.28	4.43%	$2.40	3.73%	8.16%
19	Southern Co.	$46.06	5.40%	$1.96	4.48%	9.88%
20	TECO Energy	$17.68	3.41%	$0.88	5.15%	8.56%
21	Westar Energy	$29.71	5.58%	$1.32	4.69%	10.27%
22	Wisconsin Energy	$38.40	5.76%	$1.20	3.31%	9.07%
23	Xcel Energy Inc.	$28.16	4.91%	$1.08	4.02%	8.93%
24	**Average**	**$39.85**	**5.44%**	**$1.57**	**4.22%**	**9.66%**
25	**Median**					**9.21%**

Sources:
[1] SNL Financial, downloaded on October 30, 2012.
[2] Schedule MPG-3.
[3] *The Value Line Investment Survey,* August 24, September 21, and November 2, 2012.

Empire District Electric

Payout Ratios

Line	Company	Dividends Per Share 2011 (1)	Dividends Per Share Projected (2)	Earnings Per Share 2011 (3)	Earnings Per Share Projected (4)	Payout Ratio 2011 (5)	Payout Ratio Projected (6)
1	American Electric Power	$1.85	$2.15	$3.13	$3.50	59.11%	61.43%
2	CenterPoint Energy	$0.79	$0.90	$1.27	$1.50	62.20%	60.00%
3	CMS Energy Corp.	$0.84	$1.20	$1.45	$1.85	57.93%	64.86%
5	Dominion Resources	$1.97	$2.60	$2.76	$3.75	71.38%	69.33%
6	DTE Energy	$2.32	$2.80	$3.67	$4.75	63.22%	58.95%
7	FirstEnergy Corp.	$2.20	$2.40	$1.88	$3.75	117.02%	64.00%
8	Great Plains Energy	$0.84	$1.10	$1.25	$1.75	67.20%	62.86%
9	Hawaiian Elec.	$1.24	$1.40	$1.44	$2.00	86.11%	70.00%
10	NextEra Energy	$2.20	$3.20	$4.82	$6.00	45.64%	53.33%
11	Northeast Utilities	$1.10	$1.70	$2.22	$3.25	49.55%	52.31%
12	OGE Energy	$1.52	$1.90	$3.45	$4.00	44.06%	47.50%
13	Pepco Holdings	$1.08	$1.16	$1.14	$1.70	94.74%	68.24%
14	Pinnacle West Capital	$2.10	$2.45	$2.99	$3.75	70.23%	65.33%
15	PNM Resources	$0.50	$1.00	$1.08	$2.05	46.30%	48.78%
16	Portland General	$1.06	$1.25	$1.95	$2.25	54.36%	55.56%
17	SCANACorp.	$1.94	$2.15	$2.97	$3.75	65.32%	57.33%
18	Sempra Energy	$1.92	$2.80	$4.47	$5.75	42.95%	48.70%
19	Southern Co.	$1.87	$2.25	$2.55	$3.25	73.33%	69.23%
20	TECO Energy	$0.85	$1.00	$1.27	$1.65	66.93%	60.61%
21	Westar Energy	$1.28	$1.48	$1.79	$2.40	71.51%	61.67%
22	Wisconsin Energy	$1.04	$1.80	$2.18	$2.75	47.71%	65.45%
23	Xcel Energy Inc.	$1.03	$1.35	$1.72	$2.25	59.88%	60.00%
24	**Average**	**$1.48**	**$1.85**	**$2.39**	**$3.13**	**64.52%**	**60.19%**

Source:
The Value Line Investment Survey, August 24, September 21, and November 2, 2012.

Empire District Electric

Sustainable Growth Rate

Line	Company	3 to 5 Year Projections										Sustainable
		Dividends Per Share (1)	Earnings Per Share (2)	Book Value Per Share (3)	Book Value Growth (4)	ROE (5)	Adjustment Factor (6)	Adjusted ROE (7)	Payout Ratio (8)	Retention Rate (9)	Internal Growth Rate (10)	Growth Rate (11)
1	American Electric Power	$2.15	$3.50	$36.75	3.91%	9.52%	1.02	9.71%	61.43%	38.57%	3.74%	4.04%
2	CenterPoint Energy	$0.90	$1.50	$12.75	5.17%	11.76%	1.03	12.06%	60.00%	40.00%	4.82%	5.14%
3	CMS Energy Corp.	$1.20	$1.85	$15.50	5.39%	11.94%	1.03	12.25%	64.86%	35.14%	4.30%	5.20%
4	Consol. Edison	$2.50	$4.25	$47.00	3.78%	9.04%	1.02	9.21%	58.82%	41.18%	3.79%	3.80%
5	Dominion Resources	$2.60	$3.75	$26.75	5.90%	14.02%	1.03	14.42%	69.33%	30.67%	4.42%	5.85%
6	DTE Energy	$2.80	$4.75	$49.75	3.74%	9.55%	1.02	9.72%	58.95%	41.05%	3.99%	4.60%
7	FirstEnergy Corp.	$2.40	$3.75	$37.00	3.11%	10.14%	1.02	10.29%	64.00%	36.00%	3.70%	3.70%
8	Great Plains Energy	$1.10	$1.75	$24.00	2.00%	7.29%	1.01	7.36%	62.86%	37.14%	2.74%	2.77%
9	Hawaiian Elec.	$1.40	$2.00	$20.25	4.89%	9.88%	1.02	10.11%	70.00%	30.00%	3.03%	6.43%
10	NextEra Energy	$3.20	$6.00	$49.25	6.52%	12.18%	1.03	12.57%	53.33%	46.67%	5.86%	6.48%
11	Northeast Utilities	$1.70	$3.25	$34.50	8.78%	9.42%	1.04	9.82%	52.31%	47.69%	4.68%	13.21%
12	OGE Energy	$1.90	$4.00	$35.75	6.47%	11.19%	1.03	11.54%	47.50%	52.50%	6.06%	6.71%
13	Pepco Holdings	$1.16	$1.70	$21.50	2.44%	7.91%	1.01	8.00%	68.24%	31.76%	2.54%	2.58%
14	Pinnacle West Capital	$2.45	$3.75	$41.50	3.48%	9.04%	1.02	9.19%	65.33%	34.67%	3.19%	4.03%
15	PNM Resources	$1.00	$2.05	$22.40	2.69%	9.15%	1.01	9.27%	48.78%	51.22%	4.75%	4.84%
16	Portland General	$1.25	$2.25	$26.00	3.33%	8.65%	1.02	8.80%	55.56%	44.44%	3.91%	3.98%
17	SCANACorp.	$2.15	$3.75	$39.75	5.85%	9.43%	1.03	9.70%	57.33%	42.67%	4.14%	6.36%
18	Sempra Energy	$2.80	$5.75	$51.00	4.46%	11.27%	1.02	11.52%	48.70%	51.30%	5.91%	6.23%
19	Southern Co.	$2.25	$3.25	$25.50	4.65%	12.75%	1.02	13.03%	69.23%	30.77%	4.01%	5.44%
20	TECO Energy	$1.00	$1.65	$13.00	4.36%	12.69%	1.02	12.96%	60.61%	39.39%	5.11%	5.43%
21	Westar Energy	$1.48	$2.40	$28.35	5.01%	8.47%	1.02	8.67%	61.67%	38.33%	3.32%	3.76%
22	Wisconsin Energy	$1.80	$2.75	$20.50	3.57%	13.41%	1.02	13.65%	65.45%	34.55%	4.72%	4.72%
23	Xcel Energy Inc.	$1.35	$2.25	$22.00	4.76%	10.23%	1.02	10.46%	60.00%	40.00%	4.19%	4.89%
24	**Average**	**$1.85**	**$3.13**	**$30.47**	**4.53%**	**10.39%**	**1.02**	**10.62%**	**60.19%**	**39.81%**	**4.21%**	**5.23%**

Sources and Notes:

Cols. (1), (2) and (3): *The Value Line Investment Survey, August 24, September 21, and November 2, 2012.*

Col. (4): [Col. (3) / Page 2 Col. (2)] ^ (1/5) - 1.

Col. (5): Col. (2) / Col. (3).

Col. (6): [2 * (1 + Col. (4))] / (2 + Col. (4)).

Col. (7): Col. (6) * Col. (5).

Col. (8): Col. (1) / Col. (2).

Col. (9): 1 - Col. (8).

Col. (10): Col. (9) * Col. (7).

Col. (11): Col. (10) + Page 2 Col. (9).

Empire District Electric

Sustainable Growth Rate

Line	Company	13-Week Average Stock Price[1] (1)	2011 Book Value Per Share[2] (2)	Market to Book Ratio (3)	Common Shares Outstanding (in Millions)[2] 2011 (4)	Common Shares Outstanding (in Millions)[2] 3-5 Years (5)	Growth (6)	S Factor[3] (7)	V Factor[4] (8)	S * V[5] (9)
1	American Electric Power	$43.56	$30.33	1.44	483.42	500.00	0.68%	0.97%	30.38%	0.30%
2	CenterPoint Energy	$20.98	$9.91	2.12	426.03	432.00	0.28%	0.59%	52.76%	0.31%
3	CMS Energy Corp.	$23.58	$11.92	1.98	254.10	266.00	0.92%	1.82%	49.44%	0.90%
4	Consol. Edison	$61.12	$39.05	1.57	292.89	293.00	0.01%	0.01%	36.10%	0.00%
5	Dominion Resources	$53.29	$20.08	2.65	570.00	595.00	0.86%	2.29%	62.32%	1.43%
6	DTE Energy	$60.05	$41.41	1.45	169.25	181.00	1.35%	1.96%	31.04%	0.61%
7	FirstEnergy Corp.	$45.26	$31.75	1.43	418.22	418.22	0.00%	0.00%	29.84%	0.00%
8	Great Plains Energy	$22.07	$21.74	1.02	136.14	153.50	2.43%	2.47%	1.48%	0.04%
9	Hawaiian Elec.	$26.99	$15.95	1.69	96.04	122.00	4.90%	8.29%	40.91%	3.39%
10	NextEra Energy	$69.29	$35.92	1.93	416.00	430.00	0.66%	1.28%	48.16%	0.62%
11	Northeast Utilities	$38.59	$22.65	1.70	177.16	314.00	12.13%	20.66%	41.30%	8.53%
12	OGE Energy	$55.28	$26.13	2.12	98.10	101.00	0.58%	1.24%	52.73%	0.65%
13	Pepco Holdings	$19.39	$19.06	1.02	227.50	255.00	2.31%	2.35%	1.69%	0.04%
14	Pinnacle West Capital	$52.91	$34.98	1.51	109.25	118.50	1.64%	2.48%	33.89%	0.84%
15	PNM Resources	$21.04	$19.62	1.07	79.65	85.00	1.31%	1.40%	6.73%	0.09%
16	Portland General	$27.34	$22.07	1.24	75.36	76.50	0.30%	0.37%	19.26%	0.07%
17	SCANACorp.	$48.49	$29.92	1.62	130.00	155.00	3.58%	5.80%	38.30%	2.22%
18	Sempra Energy	$67.28	$41.00	1.64	239.93	246.00	0.50%	0.82%	39.06%	0.32%
19	Southern Co.	$46.06	$20.32	2.27	865.13	915.00	1.13%	2.56%	55.89%	1.43%
20	TECO Energy	$17.68	$10.50	1.68	215.80	221.00	0.48%	0.80%	40.62%	0.33%
21	Westar Energy	$29.71	$22.20	1.34	125.70	134.00	1.29%	1.72%	25.29%	0.44%
22	Wisconsin Energy	$38.40	$17.20	2.23	230.49	230.50	0.00%	0.00%	55.21%	0.00%
23	Xcel Energy Inc.	$28.16	$17.44	1.61	486.49	515.00	1.15%	1.85%	38.06%	0.70%
24	**Average**	**$39.85**	**$24.40**	**1.67**	**274.90**	**293.79**	**1.67%**	**2.68%**	**36.11%**	**1.06%**

Sources and Notes:

[1] SNL Financial, downloaded on October 30, 2012.

[2] *The Value Line Investment Survey, August 24, September 21, and November 2, 2012.*

[3] Expected Growth in the Number of Shares, Column (3) * Column (6).

[4] Expected Profit of Stock Investment, [1 - 1 / Column (3)].

Empire District Electric

Constant Growth DCF Model
(Sustainable Growth Rate)

Line	Company	13-Week AVG Stock Price[1] (1)	Sustainable Growth[2] (2)	Annualized Dividend[3] (3)	Adjusted Yield (4)	Constant Growth DCF (5)
1	American Electric Power	$43.56	4.04%	$1.88	4.49%	8.53%
2	CenterPoint Energy	$20.98	5.14%	$0.81	4.06%	9.20%
3	CMS Energy Corp.	$23.58	5.20%	$0.96	4.28%	9.49%
4	Consol. Edison	$61.12	3.80%	$2.42	4.11%	7.91%
5	Dominion Resources	$53.29	5.85%	$2.11	4.19%	10.04%
6	DTE Energy	$60.05	4.60%	$2.48	4.32%	8.92%
7	FirstEnergy Corp.	$45.26	3.70%	$2.20	5.04%	8.75%
8	Great Plains Energy	$22.07	2.77%	$0.85	3.96%	6.73%
9	Hawaiian Elec.	$26.99	6.43%	$1.24	4.89%	11.32%
10	NextEra Energy	$69.29	6.48%	$2.40	3.69%	10.17%
11	Northeast Utilities	$38.59	13.21%	$1.37	4.03%	17.24%
12	OGE Energy	$55.28	6.71%	$1.57	3.03%	9.74%
13	Pepco Holdings	$19.39	2.58%	$1.08	5.71%	8.30%
14	Pinnacle West Capital	$52.91	4.03%	$2.18	4.29%	8.31%
15	PNM Resources	$21.04	4.84%	$0.58	2.89%	7.73%
16	Portland General	$27.34	3.98%	$1.08	4.11%	8.09%
17	SCANACorp.	$48.49	6.36%	$1.98	4.34%	10.70%
18	Sempra Energy	$67.28	6.23%	$2.40	3.79%	10.02%
19	Southern Co.	$46.06	5.44%	$1.96	4.49%	9.93%
20	TECO Energy	$17.68	5.43%	$0.88	5.25%	10.68%
21	Westar Energy	$29.71	3.76%	$1.32	4.61%	8.37%
22	Wisconsin Energy	$38.40	4.72%	$1.20	3.27%	7.99%
23	Xcel Energy Inc.	$28.16	4.89%	$1.08	4.02%	8.91%
24	**Average**	**$39.85**	**5.23%**	**$1.57**	**4.21%**	**9.44%**
25	**Median**					**8.92%**

Sources:

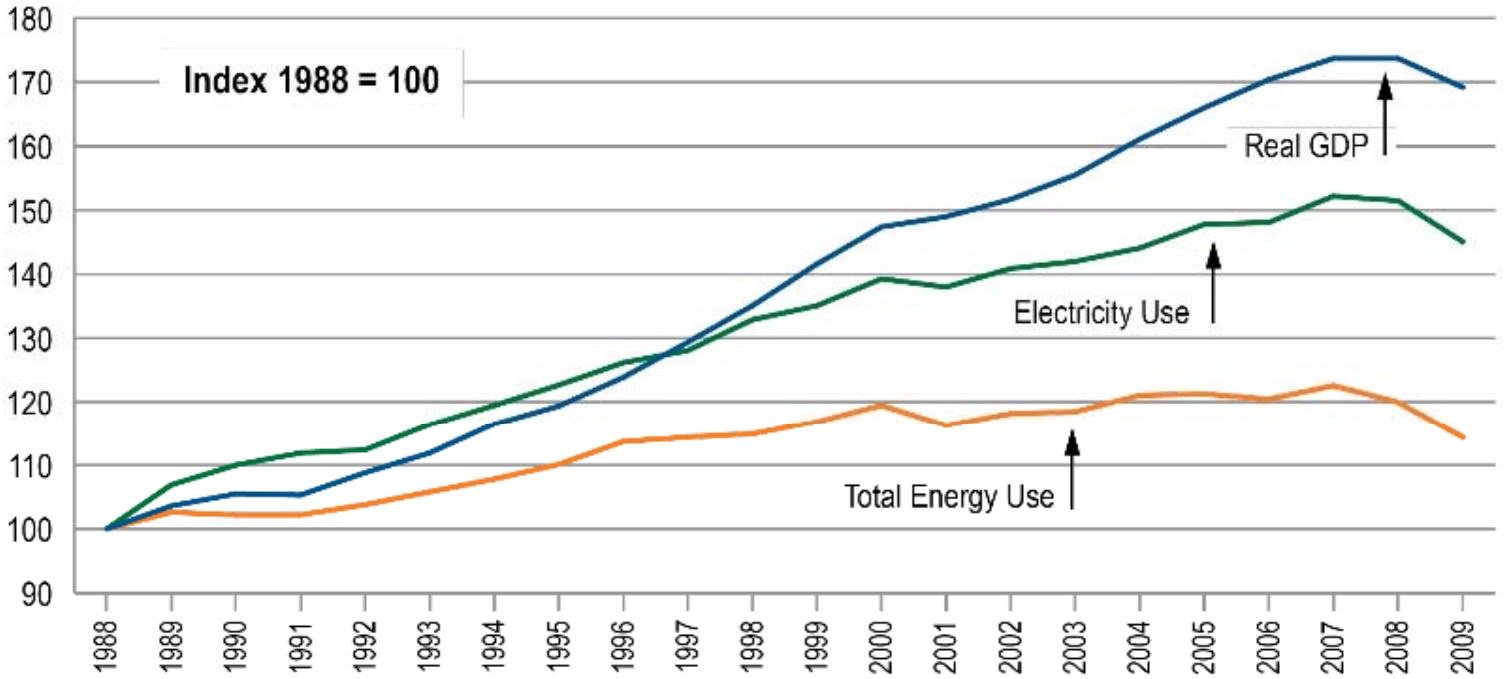
[1] SNL Financial, downloaded on October 30, 2012.

[2] Schedule MPG-6, page 1 of 2.

[3] *The Value Line Investment Survey,* August 24, September 21, and November 2, 2012.

Empire District Electric

Electricity Sales Are Linked to U.S. Economic Growth



Note:
1988 represents the base year. Graph depicts increases or decreases from the base year.

Sources:
U.S. Department of Energy, Energy Information Administration.
Edison Electric Institute, http://www.eei.org.

Empire District Electric

Multi-Stage Growth DCF Model

Line	Company	13-Week AVG Stock Price[1] (1)	Annualized Dividend[2] (2)	First Stage Growth[3] (3)	Second Stage Growth Year 6 (4)	Year 7 (5)	Year 8 (6)	Year 9 (7)	Year 10 (8)	Third Stage Growth[4] (9)	Multi-Stage Growth DCF (10)
1	American Electric Power	$43.56	$1.88	3.38%	3.63%	3.89%	4.14%	4.39%	4.65%	4.90%	9.01%
2	CenterPoint Energy	$20.98	$0.81	5.78%	5.64%	5.49%	5.34%	5.19%	5.05%	4.90%	9.18%
3	CMS Energy Corp.	$23.58	$0.96	6.07%	5.87%	5.68%	5.48%	5.29%	5.09%	4.90%	9.49%
4	Consol. Edison	$61.12	$2.42	3.27%	3.54%	3.82%	4.09%	4.36%	4.63%	4.90%	8.64%
5	Dominion Resources	$53.29	$2.11	5.23%	5.18%	5.12%	5.07%	5.01%	4.96%	4.90%	9.14%
6	DTE Energy	$60.05	$2.48	4.83%	4.84%	4.85%	4.86%	4.88%	4.89%	4.90%	9.21%
7	FirstEnergy Corp.	$45.26	$2.20	3.50%	3.73%	3.97%	4.20%	4.43%	4.67%	4.90%	9.57%
8	Great Plains Energy	$22.07	$0.85	7.81%	7.32%	6.84%	6.35%	5.87%	5.38%	4.90%	9.73%
9	Hawaiian Elec.	$26.99	$1.24	6.45%	6.19%	5.93%	5.68%	5.42%	5.16%	4.90%	10.19%
10	NextEra Energy	$69.29	$2.40	5.55%	5.44%	5.34%	5.23%	5.12%	5.01%	4.90%	8.68%
11	Northeast Utilities	$38.59	$1.37	6.68%	6.39%	6.09%	5.79%	5.49%	5.20%	4.90%	9.07%
12	OGE Energy	$55.28	$1.57	5.26%	5.20%	5.14%	5.08%	5.02%	4.96%	4.90%	7.94%
13	Pepco Holdings	$19.39	$1.08	6.00%	5.82%	5.63%	5.45%	5.27%	5.08%	4.90%	11.14%
14	Pinnacle West Capital	$52.91	$2.18	6.32%	6.09%	5.85%	5.61%	5.37%	5.14%	4.90%	9.62%
15	PNM Resources	$21.04	$0.58	10.65%	9.69%	8.73%	7.77%	6.82%	5.86%	4.90%	9.03%
16	Portland General	$27.34	$1.08	4.12%	4.25%	4.38%	4.51%	4.64%	4.77%	4.90%	8.84%
17	SCANACorp.	$48.49	$1.98	4.76%	4.78%	4.81%	4.83%	4.85%	4.88%	4.90%	9.14%
18	Sempra Energy	$67.28	$2.40	4.43%	4.51%	4.59%	4.67%	4.74%	4.82%	4.90%	8.53%
19	Southern Co.	$46.06	$1.96	5.40%	5.32%	5.23%	5.15%	5.07%	4.98%	4.90%	9.50%
20	TECO Energy	$17.68	$0.88	3.41%	3.66%	3.91%	4.16%	4.40%	4.65%	4.90%	9.66%
21	Westar Energy	$29.71	$1.32	5.58%	5.47%	5.36%	5.24%	5.13%	5.01%	4.90%	9.76%
22	Wisconsin Energy	$38.40	$1.20	5.76%	5.62%	5.47%	5.33%	5.19%	5.04%	4.90%	8.36%
23	Xcel Energy Inc.	$28.16	$1.08	4.91%	4.91%	4.90%	4.90%	4.90%	4.90%	4.90%	8.92%
24	**Average**	**$39.85**	**$1.57**	**5.44%**	**5.35%**	**5.26%**	**5.17%**	**5.08%**	**4.99%**	**4.90%**	**9.23%**
25	**Median**										**9.14%**

Sources:

[1] SNL Financial, downloaded on October 30, 2012.

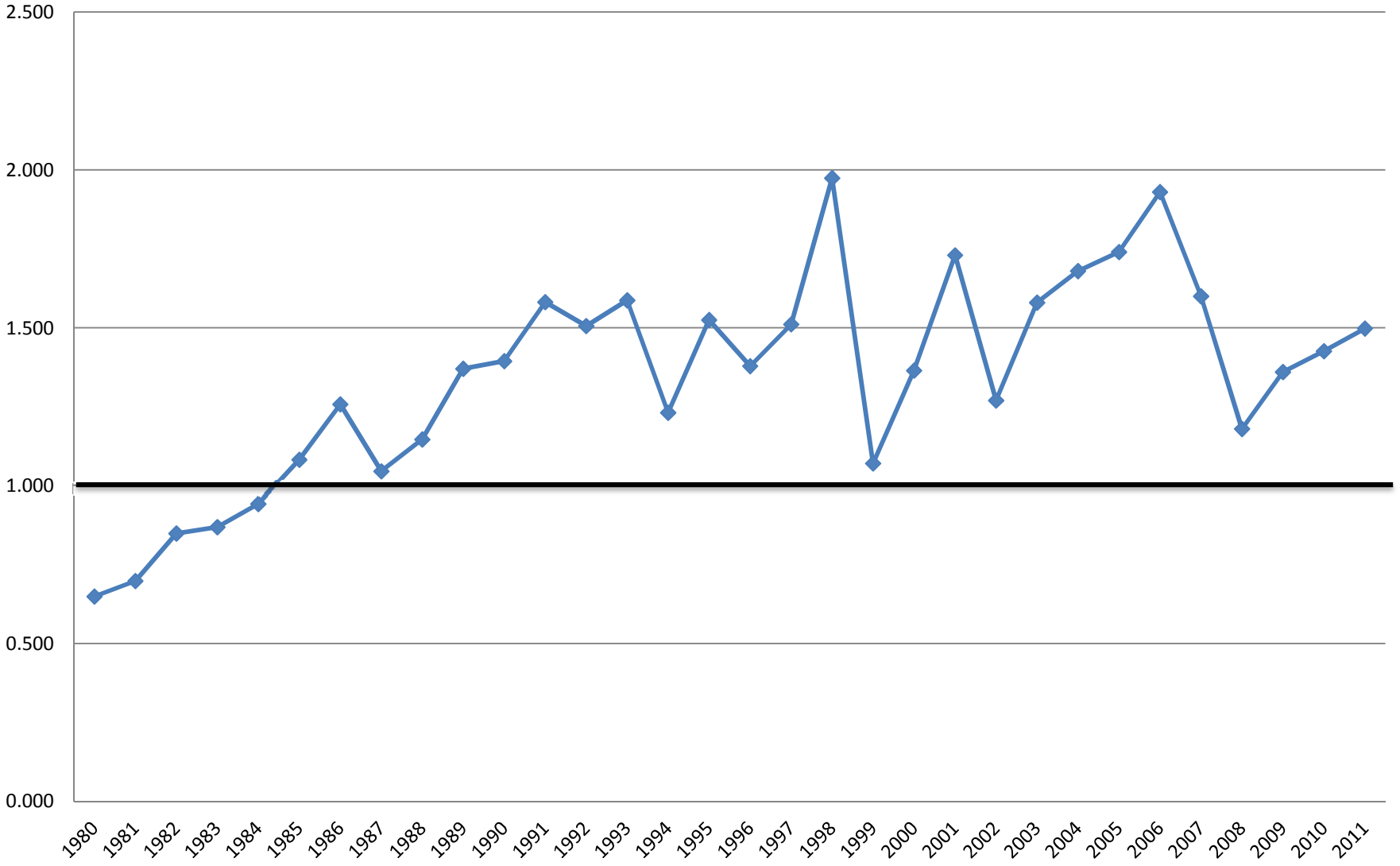
[2] *The Value Line Investment Survey,* August 24, September 21, and November 2, 2012.

[3] Schedule MPG-3.

[4] *Blue Chip Economic Indicators,* October 1, 2012 at 14.

Empire District Electric

Common Stock Market/Book Ratio



Schedule MPG-10

Empire District Electric

Equity Risk Premium - Treasury Bond

Line	Year	Authorized Electric Returns[1] (1)	Treasury Bond Yield[2] (2)	Indicated Risk Premium (3)
1	1986	13.93%	7.80%	6.13%
2	1987	12.99%	8.58%	4.41%
3	1988	12.79%	8.96%	3.83%
4	1989	12.97%	8.45%	4.52%
5	1990	12.70%	8.61%	4.09%
6	1991	12.55%	8.14%	4.41%
7	1992	12.09%	7.67%	4.42%
8	1993	11.41%	6.60%	4.81%
9	1994	11.34%	7.37%	3.97%
10	1995	11.55%	6.88%	4.67%
11	1996	11.39%	6.70%	4.69%
12	1997	11.40%	6.61%	4.79%
13	1998	11.66%	5.58%	6.08%
14	1999	10.77%	5.87%	4.90%
15	2000	11.43%	5.94%	5.49%
16	2001	11.09%	5.49%	5.60%
17	2002	11.16%	5.43%	5.73%
18	2003	10.97%	4.96%	6.01%
19	2004	10.75%	5.05%	5.70%
20	2005	10.54%	4.65%	5.89%
21	2006	10.36%	4.99%	5.37%
22	2007	10.36%	4.83%	5.53%
23	2008	10.46%	4.28%	6.18%
24	2009	10.48%	4.07%	6.41%
25	2010	10.34%	4.25%	6.09%
26	2011	10.22%	3.91%	6.31%
27	2012 [3]	9.97%	2.94%	7.03%
28	**Average**	**11.40%**	**6.10%**	**5.30%**

Sources:

[1] Regulatory Research Associates, Inc., *Regulatory Focus,* Jan. 85 - Dec. 06, and October 4, 2012, excluding the VA cases, which are subject to a 200 basis point adjustment for certain generation assets.

[2] St. Louis Federal Reserve: Economic Research, http://research.stlouisfed.org/. The yields from 2002 to 2005 represent the 20-Year Treasury yields obtained from the Federal Reserve Bank.

[3] 2012 data is through September 30, 2012

Empire District Electric

Equity Risk Premium - Utility Bond

Line	Year	Authorized Electric Returns[1] (1)	Average "A" Rated Utility Bond Yield[2] (2)	Indicated Risk Premium (3)
1	1986	13.93%	9.58%	4.35%
2	1987	12.99%	10.10%	2.89%
3	1988	12.79%	10.49%	2.30%
4	1989	12.97%	9.77%	3.20%
5	1990	12.70%	9.86%	2.84%
6	1991	12.55%	9.36%	3.19%
7	1992	12.09%	8.69%	3.40%
8	1993	11.41%	7.59%	3.82%
9	1994	11.34%	8.31%	3.03%
10	1995	11.55%	7.89%	3.66%
11	1996	11.39%	7.75%	3.64%
12	1997	11.40%	7.60%	3.80%
13	1998	11.66%	7.04%	4.62%
14	1999	10.77%	7.62%	3.15%
15	2000	11.43%	8.24%	3.19%
16	2001	11.09%	7.76%	3.33%
17	2002	11.16%	7.37%	3.79%
18	2003	10.97%	6.58%	4.39%
19	2004	10.75%	6.16%	4.59%
20	2005	10.54%	5.65%	4.89%
21	2006	10.36%	6.07%	4.29%
22	2007	10.36%	6.07%	4.29%
23	2008	10.46%	6.53%	3.93%
24	2009	10.48%	6.04%	4.44%
25	2010	10.34%	5.46%	4.88%
26	2011	10.22%	5.04%	5.18%
27	2012 [3]	10.05%	4.20%	5.85%
28	**Average**	**11.40%**	**7.51%**	**3.89%**

Sources:

[1] Regulatory Research Associates, Inc., *Regulatory Focus,* Jan. 85 - Dec. 06, and October 4, 2012, excluding the VA cases, which are subject to a 200 basis point adjustment for certain generation assets.

[2] Mergent Public Utility Manual, Mergent Weekly News Reports, 2003. The utility yields for the period 2001-2009 were obtained from the Mergent Bond Record. The utility yields from 2010-2011 were obtained from http://credittrends.moodys.com/.

[3] 2012 data is through September 30, 2012.

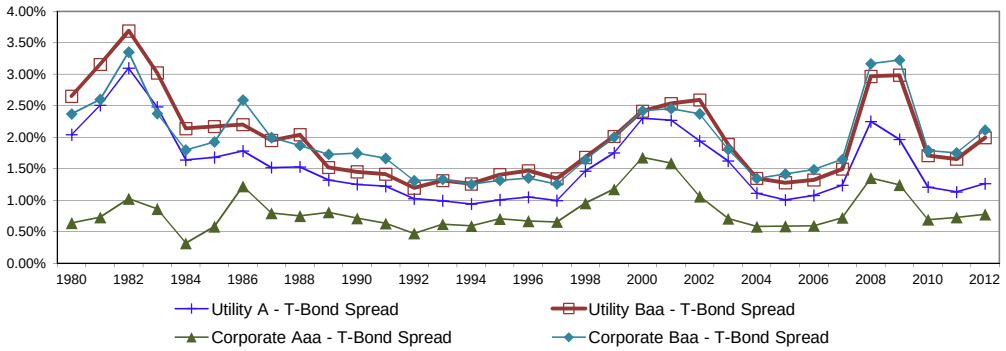
Empire District Electric

Bond Yield Spreads

Line	Year	T-Bond Yield[1] (1)	Public Utility Bond A[2] (2)	Public Utility Bond Baa[2] (3)	A-T-Bond Spread (4)	Baa-T-Bond Spread (5)	Corporate Bond Aaa[1] (6)	Corporate Bond Baa[1] (7)	Aaa-T-Bond Spread (8)	Baa-T-Bond Spread (9)	Utility to Corp. Baa Spread (10)
1	1980	11.30%	13.34%	13.95%	2.04%	2.65%	11.94%	13.67%	0.64%	2.37%	0.28%
2	1981	13.44%	15.95%	16.60%	2.51%	3.16%	14.17%	16.04%	0.73%	2.60%	0.56%
3	1982	12.76%	15.86%	16.45%	3.10%	3.69%	13.79%	16.11%	1.03%	3.35%	0.34%
4	1983	11.18%	13.66%	14.20%	2.48%	3.02%	12.04%	13.55%	0.86%	2.38%	0.65%
5	1984	12.39%	14.03%	14.53%	1.64%	2.14%	12.71%	14.19%	0.32%	1.80%	0.34%
6	1985	10.79%	12.47%	12.96%	1.68%	2.17%	11.37%	12.72%	0.58%	1.93%	0.24%
7	1986	7.80%	9.58%	10.00%	1.78%	2.20%	9.02%	10.39%	1.22%	2.59%	-0.39%
8	1987	8.58%	10.10%	10.53%	1.52%	1.95%	9.38%	10.58%	0.80%	2.00%	-0.05%
9	1988	8.96%	10.49%	11.00%	1.53%	2.04%	9.71%	10.83%	0.75%	1.87%	0.17%
10	1989	8.45%	9.77%	9.97%	1.32%	1.52%	9.26%	10.18%	0.81%	1.73%	-0.21%
11	1990	8.61%	9.86%	10.06%	1.25%	1.45%	9.32%	10.36%	0.71%	1.75%	-0.29%
12	1991	8.14%	9.36%	9.55%	1.22%	1.41%	8.77%	9.80%	0.63%	1.67%	-0.25%
13	1992	7.67%	8.69%	8.86%	1.02%	1.19%	8.14%	8.98%	0.47%	1.31%	-0.12%
14	1993	6.60%	7.59%	7.91%	0.99%	1.31%	7.22%	7.93%	0.62%	1.33%	-0.02%
15	1994	7.37%	8.31%	8.63%	0.94%	1.26%	7.96%	8.62%	0.59%	1.25%	0.01%
16	1995	6.88%	7.89%	8.29%	1.01%	1.41%	7.59%	8.20%	0.71%	1.32%	0.09%
17	1996	6.70%	7.75%	8.17%	1.05%	1.47%	7.37%	8.05%	0.67%	1.35%	0.12%
18	1997	6.61%	7.60%	7.95%	0.99%	1.34%	7.26%	7.86%	0.66%	1.26%	0.09%
19	1998	5.58%	7.04%	7.26%	1.46%	1.68%	6.53%	7.22%	0.95%	1.64%	0.04%
20	1999	5.87%	7.62%	7.88%	1.75%	2.01%	7.04%	7.87%	1.18%	2.01%	0.01%
21	2000	5.94%	8.24%	8.36%	2.30%	2.42%	7.62%	8.36%	1.68%	2.42%	-0.01%
22	2001	5.49%	7.76%	8.03%	2.27%	2.54%	7.08%	7.95%	1.59%	2.45%	0.08%
23	2002	5.43%	7.37%	8.02%	1.94%	2.59%	6.49%	7.80%	1.06%	2.37%	0.22%
24	2003	4.96%	6.58%	6.84%	1.62%	1.89%	5.67%	6.77%	0.71%	1.81%	0.08%
25	2004	5.05%	6.16%	6.40%	1.11%	1.35%	5.63%	6.39%	0.58%	1.35%	0.00%
26	2005	4.65%	5.65%	5.93%	1.00%	1.28%	5.24%	6.06%	0.59%	1.42%	-0.14%
27	2006	4.99%	6.07%	6.32%	1.08%	1.32%	5.59%	6.48%	0.60%	1.49%	-0.16%
28	2007	4.83%	6.07%	6.33%	1.24%	1.50%	5.56%	6.48%	0.72%	1.65%	-0.15%
29	2008	4.28%	6.53%	7.25%	2.25%	2.97%	5.63%	7.45%	1.35%	3.17%	-0.20%
30	2009	4.07%	6.04%	7.06%	1.97%	2.99%	5.31%	7.30%	1.24%	3.23%	-0.24%
31	2010	4.25%	5.46%	5.96%	1.21%	1.71%	4.94%	6.04%	0.69%	1.79%	-0.08%
32	2011	3.91%	5.04%	5.56%	1.13%	1.65%	4.64%	5.66%	0.73%	1.75%	-0.10%
32	2012 [3]	2.94%	4.20%	4.93%	1.26%	1.99%	3.72%	5.06%	0.78%	2.11%	-0.12%
33	**Average**	**7.17%**	**8.73%**	**9.14%**	**1.57%**	**1.98%**	**7.99%**	**9.12%**	**0.83%**	**1.95%**	**0.02%**

Yield Spreads

Treasury Vs. Corporate & Treasury Vs. Utility



Sources:

[1] St. Louis Federal Reserve: Economic Research, http://research.stlouisfed.org/.

[2] Mergent Public Utility Manual, Mergent Weekly News Reports, 2003. The utility yields for the period 2001-2009 were obtained from the Mergent Bond Record. The utility yields from 2010-2011 were obtained from http://credittrends.moodys.com/.

[3] 2012 data is through September 30, 2012.

Empire District Electric

Treasury and Utility Bond Yields

Line	Date	Treasury Bond Yield[1] (1)	"A" Rated Utility Bond Yield[2] (2)	"Baa" Rated Utility Bond Yield[2] (3)
1	10/26/12	2.92%	3.88%	4.49%
2	10/19/12	2.94%	3.91%	4.49%
3	10/12/12	2.83%	3.85%	4.49%
4	10/05/12	2.96%	4.03%	4.68%
5	09/28/12	2.82%	3.95%	4.67%
6	09/21/12	2.95%	4.08%	4.80%
7	09/14/12	3.09%	4.23%	5.02%
8	09/07/12	2.81%	3.97%	4.83%
9	08/31/12	2.68%	3.86%	4.73%
10	08/24/12	2.79%	3.99%	4.86%
11	08/17/12	2.93%	4.14%	3.83%
12	08/10/12	2.74%	3.96%	4.86%
13	08/03/12	2.65%	3.97%	4.84%
14	**Average**	**2.85%**	**3.99%**	**4.66%**
15	**Spread To Treasury**		**1.14%**	**1.81%**

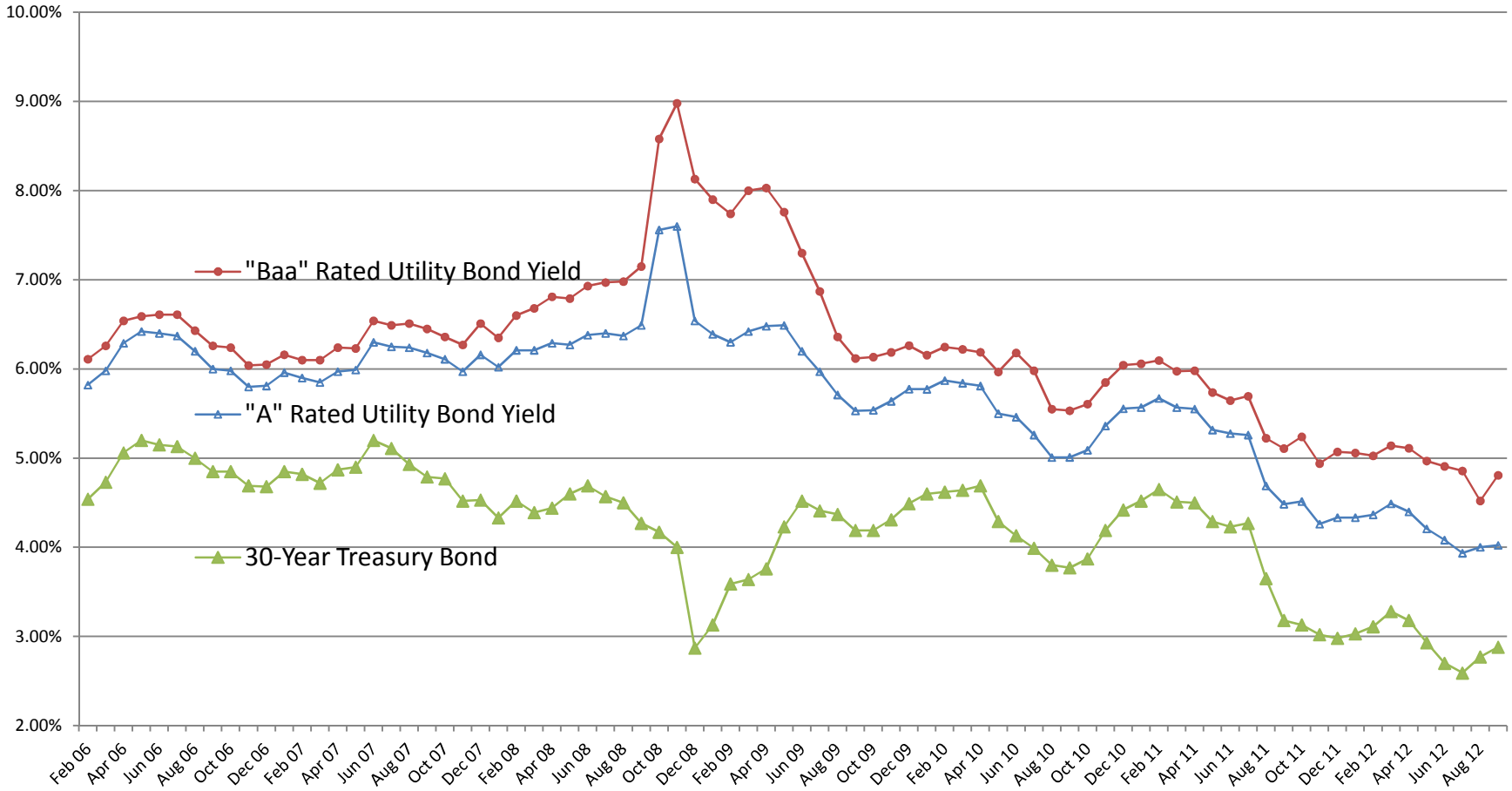
Sources:

[1] St. Louis Federal Reserve: Economic Research, http://research.stlouisfed.org.

[2]http://credittrends.moodys.com/.

Empire District Electric

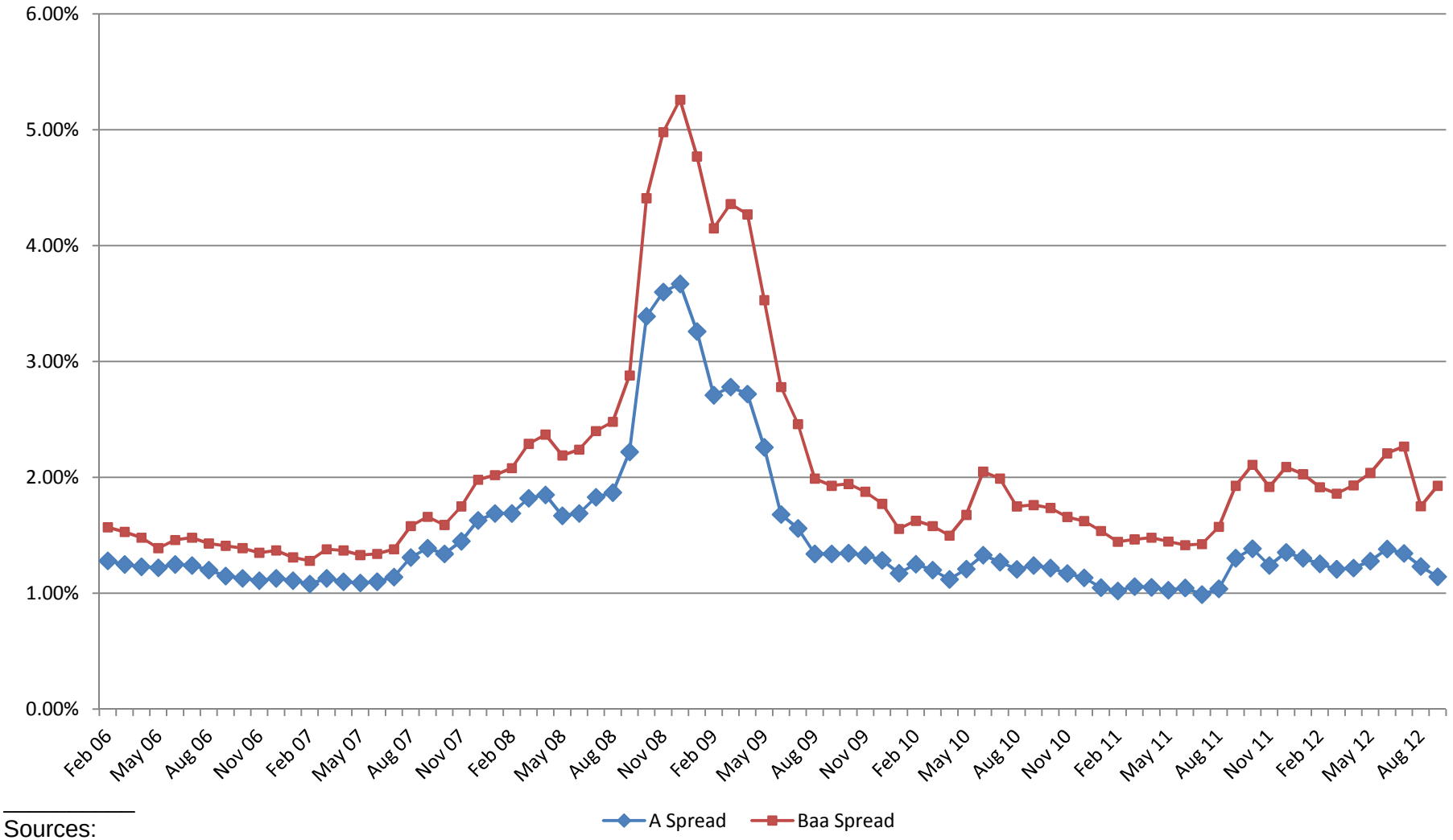
Trends in Bond Yields



Sources:
Merchant Bond Record.
www.moodys.com, Bond Yields and Key Indicators.
St. Louis Federal Reserve: Economic Research, http://research.stlouisfed.org/

Empire District Electric

Yield Spread Between Utility Bonds and 30-Year Treasury Bonds



Sources:
Merchant Bond Record.
www.moodys.com, Bond Yields and Key Indicators.
St. Louis Federal Reserve: Economic Research, http://research.stlouisfed.org/

Empire District Electric

Value Line Beta

Line	Company	Beta
1	American Electric Power	0.70
2	CenterPoint Energy	0.80
3	CMS Energy Corp.	0.75
4	Consol. Edison	0.60
5	Dominion Resources	0.65
6	DTE Energy	0.75
7	FirstEnergy Corp.	0.80
8	Great Plains Energy	0.75
9	Hawaiian Elec.	0.70
10	NextEra Enerqy	0.75
11	Northeast Utilities	0.70
12	OGE Energy	0.75
13	Pepco Holdings	0.75
14	Pinnacle West Capital	0.70
15	PNM Resources	0.95
16	Portland General	0.75
17	SCANACorp.	0.65
18	Sempra Enerqy	0.80
19	Southern Co.	0.55
20	TECO Energy	0.85
21	Westar Energy	0.75
22	Wisconsin Energy	0.65
23	Xcel Energy Inc.	0.65
24	**Average**	**0.73**

Source:
The Value Line Investment Survey,
August 24, September 21, and November 2, 2012.

Empire District Electric

CAPM Return

Line	Description	Market Risk Premium
1	Risk-Free Rate[1]	3.40%
2	Risk Premium[2]	6.70%
3	Beta[3]	0.73
4	**CAPM**	**8.29%**

Sources:

[1] *Blue Chip Financial Forecasts*; November 1, 2012, at 2.

[2] Morningstar, Inc. *Ibbotson SBBI 2012 Classic Yearbook* at 86, and Morningstar, Inc. *Ibbotson SBBI 2012 Valuation Yearbook* at 54 and 66.

[3] Schedule MPG-15.

Empire District Electric

Standard & Poor's Credit Metrics

Line	Description	Retail Cost of Service Amount (1)	S&P Benchmark[1/2] Significant (2)	S&P Benchmark[1/2] Aggressive (3)	Reference (4)
1	Rate Base	$ 1,005,373,388			Schedule WSK-1.
2	Weighted Common Return	4.64%			Page 2, Line 2, Col. 4.
3	Pre-Tax Rate of Return	10.57%			Page 2, Line 3, Col. 5.
4	Income to Common	$ 46,611,286			Line 1 x Line 2.
5	EBIT	$ 106,228,705			Line 1 x Line 3.
6	Depreciation & Amortization	$ 56,494,433			Schedule WSK-2.
7	Imputed Amortization[3]	$ 2,502,559			Page 4, Line 14, Col. 1.
8	Deferred Income Taxes & ITC	$ 27,096,903			Schedule WSK-2.
9	Funds from Operations (FFO)	$ 132,705,181			Sum of Line 4 and Lines 6 through 8.
10	Imputed Interest Expense[3]	$ 3,086,490			Page 4, Line 13, Col. 1.
11	EBITDA	$ 168,312,187			Sum of Lines 5 through 7 and Line 10.
12	Total Debt Ratio	53%	45% - 50%	50% - 60%	Page 3, Line 3, Col. 2.
13	Debt to EBITDA	3.2x	3.0x - 4.0x	4.0x - 5.0x	(Line 1 x Line 12) / Line 11.
14	FFO to Total Debt	25%	20% - 30%	12% - 20%	Line 9 / (Line 1 x Line 12).

Sources:

[1] Standard & Poor's: "Criteria Methodology: Business Risk/Financial Risk Matrix Expanded," May 27, 2009.

[2] S&P RatingsDirect: "U.S. Regulated Electric Utilities, Strongest to Weakest," October 22, 2012.

[3] S&P RatingsDirect: "Empire District Electric Co.," March 23, 2012.

Note:

Based on the October 2012 S&P report, Empire has an "Excellent" business profile and an "Aggressive" financial profile.

Empire District Electric

Standard & Poor's Credit Metrics
(Pre-Tax Rate of Return)

Line	Description	Amount (1)	Weight (2)	Cost (3)	Weighted Cost (4)	Pre-Tax Weighted Cost (5)
1	Long-Term Debt	$ 669,016,299	51.2%	5.94%	3.04%	3.04%
2	Common Equity*	637,714,288	48.8%	**9.50%**	4.64%	7.52%
3	**Total**	**$ 1,306,730,587**	**100.0%**		**7.68%**	**10.57%**
4	Tax Conversion Factor*					1.6231

Sources:
Sager Direct at 3.
* Schedule WSK-1.

Empire District Electric

Standard & Poor's Credit Metrics
(Financial Capital Structure)

Line	Description	Amount (1)	Weight (2)
1	Long-Term Debt	$ 669,016,299	49.28%
2	Off Balance Sheet Debt*	50,800,000	3.74%
3	**Total Debt**	**$ 719,816,299**	**53.02%**
4	Common Equity*	637,714,288	46.98%
5	**Total**	**$ 1,357,530,587**	**100.00%**

Sources:
Sager Direct at 3.
* Page 4, Line 6, Col. 1.

Empire District Electric

Standard & Poor's Credit Metrics
Off-Balance Sheet Debt Equivalents

Line	Description	Amount (1)	Reference (2)
	Empire Missouri Allocator [1]		
1	MO Rate Base	$1,005,673,388	
2	Total Rate Base	$1,205,573,855	
3	Jurisdictional Allocator	**83.42%**	Line 1 / Line 2.
	Total Company [2]		
	Off-Balance Sheet Debt		
4	Operating Leases	$ 4,700,000	
5	Purchased Power Agreements	$ 46,100,000	
6	**Total**	**$ 50,800,000**	
	Imputed Interest Expense		
7	Operating Leases	$ 700,000	
8	Purchased Power Agreements	$ 3,000,000	
9	**Total**	**$ 3,700,000**	
	Imputed Amortization Expense		
10	Operating Leases	$ 300,000	
11	Purchased Power Agreements	$ 2,700,000	
12	**Total**	**$ 3,000,000**	
	Missouri Allocation		
13	Imputed Interest Expense	$ 3,086,490	Lines 3 x Line 9.
14	Imputed Amortization	$ 2,502,559	Lines 3 x Line 12.

Sources:

[1] Company Workpaper: Filing TME 3_31_2012 2.xls.

[2] S&P RatingsDirect: "Empire District Electric Co.," March 23, 2012.

Empire District Electric

Vander Weide's Constant Growth DCF Model

Line	Company	Dividend (d_0) (1)	Price (P_0) (2)	Growth Rate (3)	DCF (4)
1	American Electric Power	$0.470	$38.38	3.5%	8.7%
2	CenterPoint Energy	$0.203	$19.32	4.9%	9.4%
3	CMS Energy Corp.	$0.240	$21.87	6.0%	10.5%
4	Consol. Edison	$0.605	$58.33	3.5%	7.8%
5	Dominion Resources	$0.528	$50.82	5.4%	9.7%
6	DTE Energy	$0.588	$54.73	4.3%	8.9%
7	Duke Energy	$0.250	$21.04	3.7%	8.7%
8	FirstEnergy Corp.	$0.550	$44.90	3.8%	9.0%
9	Great Plains Energy	$0.213	$20.08	5.0%	9.5%
10	Hawaiian Elec.	$0.310	$25.57	11.4%	17.1%
11	NextEra Energy	$0.600	$61.09	5.5%	9.5%
12	Northeast Utilities	$0.294	$36.21	6.5%	9.9%
13	OGE Energy	$0.393	$52.65	7.7%	10.9%
14	Pepco Holdings	$0.270	$19.18	3.7%	9.8%
15	Pinnacle West Capital	$0.525	$47.34	5.9%	10.8%
16	PNM Resources	$0.145	$18.27	11.0%	14.3%
17	Portland General	$0.265	$24.98	4.3%	8.9%
18	SCANACorp.	$0.495	$44.91	4.4%	9.1%
19	Sempra Energy	$0.600	$59.99	7.1%	10.8%
20	Southern Co.	$0.490	$44.83	5.6%	10.2%
21	TECO Energy	$0.220	$17.71	4.6%	9.9%
22	Westar Energy	$0.330	$27.87	6.1%	11.2%
23	Wisconsin Energy	$0.300	$34.90	6.6%	10.0%
24	Xcel Energy Inc.	$0.260	$26.52	5.3%	9.5%
25	Average	$0.381	$36.31	5.6%	10.2%
26	Median				9.7%

Source:
Schedule JVW-1

Empire District Electric

Vander Weide's Revised Constant Growth DCF Model

Line	Company	Annual Dividend (1)	Price (2)	Growth Rate (3)	DCF (4)
1	American Electric Power	$1.870	$38.38	3.5%	8.6%
2	CenterPoint Energy	$0.793	$19.32	4.9%	9.2%
3	CMS Energy Corp.	$0.900	$21.87	6.0%	10.3%
4	Consol. Edison	$2.405	$58.33	3.5%	7.7%
5	Dominion Resources	$2.006	$50.82	5.4%	9.6%
6	DTE Energy	$2.352	$54.73	4.3%	8.8%
7	Duke Energy	$0.995	$21.04	3.7%	8.6%
8	FirstEnergy Corp.	$2.200	$44.90	3.8%	8.9%
9	Great Plains Energy	$0.841	$20.08	5.0%	9.4%
10	Hawaiian Elec.	$1.240	$25.57	11.4%	16.8%
11	NextEra Energy	$2.250	$61.09	5.5%	9.4%
12	Northeast Utilities	$1.119	$36.21	6.5%	9.8%
13	OGE Energy	$1.536	$52.65	7.7%	10.8%
14	Pepco Holdings	$1.080	$19.18	3.7%	9.5%
15	Pinnacle West Capital	$2.100	$47.34	5.9%	10.6%
16	PNM Resources	$0.520	$18.27	11.0%	14.1%
17	Portland General	$1.060	$24.98	4.3%	8.7%
18	SCANACorp.	$1.950	$44.91	4.4%	8.9%
19	Sempra Energy	$2.040	$59.99	7.1%	10.7%
20	Southern Co.	$1.909	$44.83	5.6%	10.1%
21	TECO Energy	$0.865	$17.71	4.6%	9.7%
22	Westar Energy	$1.290	$27.87	6.1%	11.0%
23	Wisconsin Energy	$1.080	$34.90	6.6%	9.9%
24	Xcel Energy Inc.	$1.040	$26.52	5.3%	9.4%
25	Average	$1.477	$36.31	5.6%	10.0%
26	Median				9.5%

Source:
Schedule JVW-1

Empire District Electric

Vander Weide's Revised Multi-Stage Growth DCF Model

Line	Company	Annual Dividend (1)	Price (2)	Growth Rate (3)	4.52% DCF (4)	4.90% DCF (5)
1	American Electric Power	$1.870	$38.38	3.5%	9.2%	9.4%
2	CenterPoint Energy	$0.793	$19.32	4.9%	9.1%	9.3%
3	CMS Energy Corp.	$0.900	$21.87	6.0%	9.7%	10.0%
4	Consol. Edison	$2.405	$58.33	3.5%	8.4%	8.7%
5	Dominion Resources	$2.006	$50.82	5.4%	9.2%	9.5%
6	DTE Energy	$2.352	$54.73	4.3%	8.9%	9.2%
7	Duke Energy	$0.995	$21.04	3.7%	9.1%	9.4%
8	FirstEnergy Corp.	$2.200	$44.90	3.8%	9.3%	9.6%
9	Great Plains Energy	$0.841	$20.08	5.0%	9.1%	9.4%
10	Hawaiian Elec.	$1.240	$25.57	11.4%	13.1%	13.3%
11	NextEra Energy	$2.250	$61.09	5.5%	9.0%	9.2%
12	Northeast Utilities	$1.119	$36.21	6.5%	9.2%	9.5%
13	OGE Energy	$1.536	$52.65	7.7%	8.7%	8.9%
14	Pepco Holdings	$1.080	$19.18	3.7%	10.0%	10.2%
15	Pinnacle West Capital	$2.100	$47.34	5.9%	9.7%	10.0%
16	PNM Resources	$0.520	$18.27	11.0%	10.3%	10.5%
17	Portland General	$1.060	$24.98	4.3%	8.9%	9.1%
18	SCANACorp.	$1.950	$44.91	4.4%	9.1%	9.3%
19	Sempra Energy	$2.040	$59.99	7.1%	9.7%	10.0%
20	Southern Co.	$1.909	$44.83	5.6%	9.5%	9.8%
21	TECO Energy	$0.865	$17.71	4.6%	9.7%	10.0%
22	Westar Energy	$1.290	$27.87	6.1%	10.2%	10.4%
23	Wisconsin Energy	$1.080	$34.90	6.6%	8.9%	9.1%
24	Xcel Energy Inc.	$1.040	$26.52	5.3%	8.9%	9.2%
25	Average	$1.477	$36.31	5.6%	9.5%	9.7%
26	Median				9.2%	9.5%

Source:
Schedule JVW-1

Empire District Electric

Accuracy of Interest Rate Forecasts
(Long-Term Treasury Bond Yields - Projected Vs. Actual)

Line	Date	Publication Data: Prior Quarter Actual Yield (1)	Publication Data: Projected Yield (2)	Publication Data: Projected Quarter (3)	Actual Yield in Projected Quarter (4)	Projected Yield Higher (Lower) Than Actual Yield* (5)
1	Dec-00	5.8%	5.8%	1Q, 02	5.6%	0.2%
2	Mar-01	5.7%	5.6%	2Q, 02	5.8%	-0.2%
3	Jun-01	5.4%	5.8%	3Q, 02	5.2%	0.6%
4	Sep-01	5.7%	5.9%	4Q, 02	5.1%	0.8%
5	Dec-01	5.5%	5.7%	1Q, 03	5.0%	0.7%
6	Mar-02	5.3%	5.9%	2Q, 03	4.7%	1.2%
7	Jun-02	5.6%	6.2%	3Q, 03	5.2%	1.0%
8	Sep-02	5.8%	5.9%	4Q, 03	5.2%	0.7%
9	Dec-02	5.2%	5.7%	1Q, 04	4.9%	0.8%
10	Mar-03	5.1%	5.7%	2Q, 04	5.4%	0.3%
11	Jun-03	5.0%	5.4%	3Q, 04	5.1%	0.3%
12	Sep-03	4.7%	5.8%	4Q, 04	4.9%	0.9%
13	Dec-03	5.2%	5.9%	1Q, 05	4.8%	1.1%
14	Mar-04	5.2%	5.9%	2Q, 05	4.6%	1.4%
15	Jun-04	4.9%	6.2%	3Q, 05	4.5%	1.7%
16	Sep-04	5.4%	6.0%	4Q, 05	4.8%	1.2%
17	Dec-04	5.1%	5.8%	1Q, 06	4.6%	1.2%
18	Mar-05	4.9%	5.6%	2Q, 06	5.1%	0.5%
19	Jun-05	4.8%	5.5%	3Q, 06	5.0%	0.5%
20	Sep-05	4.6%	5.2%	4Q, 06	4.7%	0.5%
21	Dec-05	4.5%	5.3%	1Q, 07	4.8%	0.5%
22	Mar-06	4.8%	5.1%	2Q, 07	5.0%	0.1%
23	Jun-06	4.6%	5.3%	3Q, 07	4.9%	0.4%
24	Sep-06	5.1%	5.2%	4Q, 07	4.6%	0.6%
25	Dec-06	5.0%	5.0%	1Q, 08	4.4%	0.6%
26	Mar-07	4.7%	5.1%	2Q, 08	4.6%	0.5%
27	Jun-07	4.8%	5.1%	3Q, 08	4.5%	0.7%
28	Sep-07	5.0%	5.2%	4Q, 08	3.7%	1.5%
29	Dec-07	4.9%	4.8%	1Q, 09	3.5%	1.4%
30	Mar-08	4.6%	4.8%	2Q, 09	4.0%	0.8%
31	Jun-08	4.4%	4.9%	3Q, 09	4.3%	0.6%
32	Sep-08	4.6%	5.1%	4Q, 09	4.3%	0.8%
33	Dec-08	4.5%	4.6%	1Q, 10	4.6%	0.0%
34	Mar-09	3.7%	4.1%	2Q, 10	4.4%	-0.3%
35	Jun-09	3.5%	4.6%	3Q, 10	3.9%	0.8%
36	Sep-09	4.0%	5.0%	4Q, 10	4.2%	0.8%
37	Dec-09	4.3%	5.0%	1Q, 11	4.6%	0.4%
38	Mar-10	4.3%	5.2%	2Q, 11	4.3%	0.9%
39	Jun-10	4.6%	5.2%	3Q, 11	3.7%	1.5%
40	Sep-10	4.4%	4.7%	4Q, 11	3.0%	1.7%
41	Dec-10	3.9%	4.6%	1Q, 12	3.1%	1.5%
42	Mar-11	4.2%	5.1%	2Q, 12	2.9%	2.2%
43	Jun-11	4.6%	5.2%	3Q, 12	2.8%	2.5%
44	Jul-11	4.4%	5.2%	4Q, 12		
45	Aug-11	4.3%	5.0%	4Q, 12		
46	Sep-11	4.3%	4.2%	4Q, 12		
47	Oct-11	3.7%	3.9%	1Q, 13		
48	Nov-11	3.7%	3.8%	1Q, 13		
49	Dec-11	3.7%	3.8%	1Q, 13		
50	Jan-12	3.0%	3.8%	2Q, 13		
51	Feb-12	3.0%	3.8%	2Q, 13		
52	Mar-12	3.0%	3.8%	2Q, 13		
53	Apr-12	3.1%	3.9%	3Q, 13		
54	May-12	3.1%	3.9%	3Q, 13		
55	Jun-12	3.1%	3.7%	3Q, 13		
56	Jul-12	2.9%	3.6%	4Q, 13		
57	Aug-12	2.9%	3.4%	4Q, 13		
58	Sep-12	2.9%	3.4%	4Q, 13		
59	Oct-12	2.8%	3.4%	1Q, 14		
60	Nov-12	2.8%	3.4%	1Q, 14		

Source:
Blue Chip Financial Forecasts , Various Dates.
* Col. 2 - Col. 4.