Exhibit No.:
Issue: Capital Structure/Rate of Return
Sponsoring Party: Empire District
Type of Exhibit: Surrebuttal Testimony
Case No.: ER-2001-299
Date Prepared: May 15, 2001

THE EMPIRE DISTRICT ELECTRIC COMPANY

BEFORE THE MISSOURI PUBLIC SERVICE COMMISSION

CASE NO. ER-2001-299

SURREBUTTAL TESTIMONY
OF
DONALD A. MURRY, Ph.D.

Exhibit No. 26
Date 5/29/01 Case No. ER-2001-299
Reporter Kem

MAY, 2001

C.H. GUERNSEY & COMPANY
ENGINEERS – ARCHITECTS – CONSULTANTS
OKLAHOMA CITY, OKLAHOMA

AFFIDAVIT

STATE OF OKLAHOMA	)	
	)	SS
COUNTY OF OKLAHOMA	)	

Before me, the undersigned Notary Public, personally appeared DONALD A. MURRY, who being duly sworn on oath deposes and says that the foregoing prepared testimony and statement of facts contained therein are true and correct to the best of his knowledge, information and belief.

Donald A. Murry

Subscribed and sworn to before me this 15th day of May, 2001.

Notary Public

My Commission Expires:

October 5, 2002

Exhibit No.:
Issue: Capital Structure/Rate of Return
Sponsoring Party: Empire District
Type of Exhibit: Surrebuttal Testimony
Case No.: ER-2001-299
Date Prepared: May 15, 2001

THE EMPIRE DISTRICT ELECTRIC COMPANY
BEFORE THE MISSOURI PUBLIC SERVICE COMMISSION
CASE NO. ER-2001-299

SURREBUTTAL TESTIMONY
OF
DONALD A. MURRY, Ph.D.

Q. Please state your name and address.

A. My name is Donald A. Murry. My address is 5555 North Grand Blvd, Oklahoma City, Oklahoma.

Q. Are you the same Donald A. Murry who filed Direct Testimony and Rebuttal testimony in this proceeding on behalf of The Empire District Electric Company ("Empire")?

A. Yes.

Q. What is the nature of your Surrebuttal Testimony?

A. I am responding to the Rebuttal Testimonies of Staff Witness Robert A. McKiddy and Office of Public Counsel Witness Mark Burdette.

Q. What aspects of Ms. McKiddy's Rebuttal Testimony does your Surrebuttal Testimony address?

A. Ms. McKiddy has demonstrated further in her Rebuttal Testimony the fundamental conceptual flaws concerning her understanding of regulation and economic principles demonstrated initially in her Direct Testimony. She had the opportunity to correct these conceptual weaknesses in her Rebuttal Testimony, but she apparently chose not to do so. To the contrary, her Rebuttal Testimony illustrates her continued apparent lack of understanding of the very critical, and potentially most significant, step in recommending a rate of return to allow in a regulatory proceeding. That is the step of performing a basic test to measure or assess the financial integrity of her recommendation. This failure is the most important problem with her testimony. There are also, however, several specific misstatements and misrepresentations in Ms. McKiddy's Rebuttal Testimony, and I will address those as well.

Q. What is the nature of her misstatements and misrepresentations?

A. They include misinterpreting my rate of return recommendation, misperceiving the implications of current market prices, erroneously citing a reference for her discussion of DCF growth rates, incorrectly identifying the relevant capital structure and ignoring the recommendation of the sources she used in her Rebuttal and Direct Testimonies.

Q. What aspects of Mr. Burdette's Rebuttal Testimony does your Surrebuttal Testimony address?

A. Mr. Burdette did not adjust for size in his CAPM analysis and in his Rebuttal Testimony he criticized me for doing so. Consequently, not only is his Rebuttal Testimony of my analysis fundamentally in error, but he also has not corrected for the bias in his own CAPM analysis. Mr. Burdette and Ms. McKiddy both have erred in their CAPM analyses in this manner.

Q. Turning again to Ms. McKiddy's Rebuttal Testimony, what evidence do you have which demonstrates that her recommendation does not meet a basic financial integrity measure related to a return on common equity for Empire?

A. After I filed my Rebuttal Testimony on May 3, 2001 and pointed out the failure of Ms. McKiddy's recommendation to meet the most fundamental tests of financial integrity, Moody's downgraded Empire's debt to Baa1. Moreover, Moody's has maintained a "negative" implication, retaining the possibility of a further downgrade.

Q. What is the significance of this?

A. As I pointed out in my Rebuttal Testimony, Fitch had downgraded Empire's debt in the period since I had prepared by Direct Testimony. Obviously, the current returns are insufficient to maintain Empire's bond rating. Since Ms. McKiddy's continued return on common equity recommendation as set out in her Rebuttal Testimony would lower the bond coverage levels further, this will only compound the problem in maintaining Empire's bond ratings. In fact, as I stated in my Rebuttal Testimony, the coverage associated with Ms. McKiddy's recommendation is similar to the coverage in all of the nearly insolvent California utilities.

Q. How would you characterize this downgrading by Moody's?

A. It is extremely important. I say this because most analysts who have addressed these issues have concluded that the lowest cost bond rating for a utility is an A or AA.

Q. What do you mean by "lowest cost bond rating?"

A. By the lowest cost bond rating, I mean the bond rating that is likely to lead to the lowest cost of borrowing. As I pointed out in my Rebuttal Testimony, low cost borrowing benefits both the common stock holders and the ratepayers. In other words, lower bond ratings and higher debt costs impact both ratepayers and stockholders adversely.

Q. Is there any evidence in her Rebuttal Testimony that Ms. McKiddy is concerned about the bond rating of Empire?

A. No. To the contrary, her recommended rate of return, which is based for the most part on the invalid standard of just meeting Empire's bond indenture requirement, is insufficient to maintain an A rating. As indicated, Fitch has downgraded Empire's debt since she filed her Direct Testimony and Ms. McKiddy did not see fit to address this issue in her Rebuttal Testimony, although she continues, at page 13, to recommend a return on common equity range of 8.5 to 9.5 percent.

Q. How did Ms. McKiddy misrepresent your return recommendation?

A. On page 5, lines 24-25 of her Rebuttal Testimony, Ms. McKiddy states: "From these analyses, Mr. Murry recommended a range of return on equity for EDE of 11.50 percent to 12.50 percent."

Q. How do you respond?

A. She is simply wrong in her understanding of my testimony. On page 19, lines 5-6, of my Direct Testimony I stated my conclusion that 11.5 percent to 12.0 percent is an adequate allowed return for Empire's common stock.

Q. In light of Ms. McKiddy's Rebuttal Testimony, do you still believe that your recommended return is appropriate for Empire in this case?

A. Yes, I do. In fact, in light of the recent downgrading of Empire's debt by both Fitch and Moody's, a return at this level is even more important because of the interest coverage impact of lower returns. In fact, not only is my recommended return appropriate, it is consistent with the Commission Staff recommendation in Case No. EM-2000-369. In that proceeding involving Empire's proposed merger with UtiliCorp United Inc. ("UtiliCorp") Staff witness David Broadwater testified on page 24, lines 13 to 20 of his Rebuttal Testimony, as follows:

> Q. What is the significance of the discount rate used to discount future cash flows?
>
> A. The discount rate used to value the company should be pre-tax weighted average cost of capital of the acquiring firm. When Empire was determining its value, it would have been appropriate for Salomon to use Empire's cost of capital as the discount rate in the analysis. A reasonable value for the pre-tax weighted average cost of capital would be 13.10% based on the Staff's opinion of the rate of return reflected in Empire's settled rate case (No. ER-97-81).

Q. You mentioned there are misrepresentations in Ms. McKiddy's Rebuttal Testimony related to the prices in your DCF analysis. What issues does Ms. McKiddy raise regarding the choice of share prices in your DCF analysis?

A. On page 6, lines 11-15 of her Rebuttal Testimony she states:

> "Mr. Murry utilizes a single high and low share price for EDE quoted from Value Line that represents the entire calendar year 2000. Staff believes that in doing so, Mr. Murry has over-stated the dividend yields of EDE and his comparable electric utility group."

Q. How do you respond?

A. She is wrong. From my Schedules DAM 8, DAM 9, and DAM 10 one can see that the share prices for Empire range from $18.90 to $27.10. Ms. McKiddy's Schedule 14 of her Direct Testimony has a range of stock prices for Empire of $19.13 to $30.75. These ranges, in fact, are similar.

Q. Do you have any comment with respect to the prices Ms. McKiddy refers to in her Rebuttal Testimony?

A. Yes. In her Rebuttal Testimony, Ms. McKiddy misrepresented the current prices that I used in my DCF calculation. She states on page 8, lines 7 to 9 the following:

> "Again, Mr. Murry utilizes a single high and low stock price for the time period reflected. Staff believes that in doing so, Mr. Murry has misrepresented the dividend yields of EDE and his comparable electric utility group."

Q. How do you respond?

A. Both her supposition and her conclusions are wrong. In Schedules DAM 11, DAM 12 and DAM 13 of my Direct Testimony, I use a price range of \$25.92 to \$26.44 for Empire, which are two-week averages. This is not a single high and low stock price. Furthermore, these prices represent the range of prices that investors had paid recently for Empire stock at the time of my filing, and therefore they are representative of then-correct market prices. Ironically, the prices that I used were higher than the average price of \$24.26 that Ms. McKiddy used in Schedule 14 of her Direct Testimony.

Q. What does this mean?

A. This means that the dividend yield, which I calculated, would actually produce a lower DCF cost of common stock than if I had used her price from her Schedule 14. In fact, there is a more fundamental problem with the prices that Ms. McKiddy used in her DCF analysis, which error she continues to make in her Rebuttal Testimony.

Q. Why do you say that Ms. McKiddy's criticism of the prices that you used in your analysis and the prices that she uses in her DCF analysis are fundamentally wrong?

A. In drawing a contrast to the prices that I used in my DCF analysis, on page 6, lines 15-18 and again on page 8, lines 9-12 of her Rebuttal Testimony, Ms. McKiddy states:

> "Staff believes the methodology employed in its analysis (i.e., averaging high and low stock prices over the time period October 2000 through March 4, 2001) yields a stock price that is more representative of the price investors are currently willing to pay for the stock of EDE."

Q. How do you respond?

A. On May 2, 2001, the day before Ms. McKiddy made this statement, Empire's stock closed at $19.10, a full $5.16 below the price Ms. McKiddy used in her Direct Testimony. There is no basis for this price, and she provided no reason for ignoring the current market prices in her DCF analysis and using prices for the period before termination of the proposed merger. I pointed out in my Rebuttal Testimony that using prices from the period before the collapse of the anticipated merger with UtiliCorp is not representative of prices that investors currently would pay for Empire's common stock.

Q. Why do you say that Ms. McKiddy misrepresented the source she used to adopt a growth rate in this proceeding and to criticize your growth rate calculation in your DCF analysis?

A. Ms. McKiddy misrepresented the purpose and the recommended use of the source publication that she cites in her Rebuttal Testimony. Specifically, on page 9, lines 1 through 5, she states the following:

> Staff relies on a publication entitled, "The Cost of Capital—A Practitioner's Guide," by David C. Parcell, for its *methodology in determining an appropriate growth rate* to be used in its DCF analyses. This *method* has been used consistently by the Commission's Financial Analysis Department and has been accepted by this Commission. [Emphasis added].

In this publication, however, Mr. Parcell clearly states that <u>he is not recommending any specific method</u> because it is a study guide and a reference manual describing the techniques applied in regulation. In the 1994 edition of this publication the following statement appears on the cover:

> Author's Note: This manual has been prepared as an educational reference on cost of capital concepts. It is intended for use as a study guide for the 1995 Certified Rate of Return Analyst Program. No cost of equity model or other concept is recommended or emphasized, nor is a procedure for employing any model recommended. Furthermore, no opinions or preferences are expressed by either the author or the National Society of Rate of Return Analysts.

To set the record straight and to clear up her misunderstanding concerning the purpose of the "Guide," I have included the cover of this publication as Schedule DAM 34.

Q. What other evidence do you have on this point?

A. On page 2 of Ms. McKiddy's source, "The Cost of Capital – A Practitioners Guide," in referring to all methods for estimating the cost of common equity, Mr. Parcell emphasizes that he is not endorsing or recommending any particular method, with the following statement:

> This part of the manual describes the major cost of equity methods. In doing so, no particular method is being endorsed. Rather, the description of each model is done from an informational perspective in order for the reader to review the theoretical basis of each model, the assumptions of the model, and various ways to estimate the inputs of the model.

The author's published statements are consistent with my understanding of the purpose behind the preparation of this manual -- that it specifically excludes the endorsement of any cost of capital methodology.

Q. Is this misrepresentation of the purpose of Mr. Parcell's "Practitioner's Guide" by Ms. McKiddy important with respect to the conclusions in her Rebuttal Testimony?

A. Yes.

Q. Please explain.

A. In her Rebuttal Testimony, Ms. McKiddy invoked Mr. Parcell's "Practitioner's Guide" as the source and basis for two points which she raised to criticize my Direct Testimony and to justify her methodology.

Q. What are these two points?

A. First, she invoked Mr. Parcell's "Guidelines" to criticize my analysis and to justify the use of historical growth rates in her DCF analysis, which use greatly understates the growth rates in earnings that investors are currently expecting in earnings per share for Empire's common stock. Second, she invoked Mr. Parcell's "Guidelines" to criticize my analysis and to defend her improper act of averaging the dividend per share, earnings per share and book value per share growth rates together as she explains on page 10, lines 23 and 24, of her Rebuttal Testimony. However, neither the historical growth rates nor this averaging methodology can be gleaned from Mr. Parcell's "Guide," and he has specifically stated in the Guide that he is not endorsing any "particular methodology."

Q. How do you respond to Ms. McKiddy when she challenges your projected growth DCF estimate in her Rebuttal Testimony?

A. She either misrepresents it or does not understand it.

Q. Please explain.

A. On page 7, lines 19-21, she says:

> "It appears Mr. Murry chose to apply the projected growth rate that results in the highest costs of capital for each respective company rather than averaging the source data, thus overstating his estimated range for cost of capital."

She either misrepresents or fails to understand my testimony on this point on two fronts. First, her assessment that I apply the highest growth rate is incorrect. See

Schedule 13 of my Direct Testimony for an illustrative example. There I calculate the range of CH Energy Group by adding the low yield (5.56%) to the low projected growth rate (1.00%) for a DCF estimate of 6.56 percent and likewise for the high yield and the higher projected growth rate. This produces a range of 5.65 percent to 8.66 percent. Had I used the method Staff Witness McKiddy describes, it would have produced a range of 8.56 percent to 8.66 percent. Second, averaging source data as she suggests is analytically inconsistent and has no theoretical basis.

Q. You mentioned that Ms. McKiddy misidentified the appropriate capital structure on page 2, lines 17-21 of her Rebuttal Testimony. What is the basis of your statement?

A. Ms. McKiddy proposed a capital structure in this proceeding that comes from the period during the planning for Empire's proposed merger with UtiliCorp. Staff recognized that the proposed merger would reduce Empire's capital costs at that time. Now Ms. McKiddy has ignored this previous Staff position and the implications of the termination of the merger. She has not updated the needed capital structure that the market anticipates for an independent Empire.

Q. What was the Staff position on capital costs in the merger case, Case No. EM-2000-364?

A. On page 15, lines 3-6 of the Rebuttal Testimony of Mr. David Broadwater testifying for the Staff in that case, he stated the following:

> It is Staff's position that there are going to be capital cost savings created from this merger in two ways. First, the cost of capital required to operate the Empire properties will be lower with UtiliCorp's current capital costs than they were with Empire as a separate company.

Then on page 8, lines, 8 to 12, Mr. Broadwater stated, as follows:

> First, Empire's normalized cost of capital is higher than UtiliCorp's actual cost of capital so there will be an immediate reduction in the capital cost to operate the Empire properties after the merger. This will be a potentially significant source of merger savings from the perspective of Empire customers.

On page 8, lines 16 to 18, he was even more specific:

> The first type of reduction in capital costs referenced above will create approximately $2.5 million per year for a total savings of approximately $25 million over the ten-year period Utilicorp is proposing to freeze Empire's capital structure. (See Schedule 2).

I have included Mr. Broadwater's Schedule 2 from his Rebuttal Testimony in that case as my Schedule DAM 35 to illustrate the Staff's position, stated only a few months ago, on the impact of the proposed merger on Empire's cost of capital.

Q. Why is Mr. Broadwater's testimony in the merger case relevant to this current proceeding and to Ms. McKiddy's Rebuttal Testimony?

A. It illustrates that the Staff's position in June 2000 was that the capital structure associated with the UtiliCorp merger should reduce Empire's capital costs by $2.5 million per year for the next ten years. It is simple logic that if the merger and the resultant capital structure would reduce the capital costs by $2.5 million then the failure of the merger will return the capital costs to the previous level. Furthermore, on page 17 of his testimony, lines 1 to 4, Mr. Broadwater noted the temporary nature of the capital structure that was so debt heavy, which capital structure Ms. McKiddy continues to advocate in this proceeding through her Rebuttal Testimony.

> Due to its pending merger with Utilicorp, the decision was made in accordance with the Merger Agreement that there would be no new equity issued except in the normal course of business. Therefore, Empire had to issue debt only to finance the construction of its new generating station.

Q. Can these two Staff positions taken within a few months of each other both be correct?

A. No. They are logically incompatible.

Q. Previously you stated that Ms. McKiddy and Mr. Burdette erred in their CAPM analyses as discussed in their Rebuttal Testimonies. What is the basis of your conclusion?

A. They both made fundamental mistakes in their CAPM analyses and then, in their Rebuttal Testimonies, criticized me for not making the same mistakes. One of their mistakes is a miscalculation of the market risk premium from the source they each cited. The other is the fact that they each ignore the instructions of that source.

Q. Describe the miscalculation of the risk premium issue?

A. Ms. McKiddy states at page 10, lines 30-33 of her Rebuttal Testimony as follows:

> "However, Mr. Murry chose to use a market risk premium of 8.10 percent which reflects the difference between what Ibbotson Associates Inc.'s Stocks, Bonds, Bills, and Inflation: 2000 Yearbook refers to as Small Company Stocks and Long-Term Government Bonds annual total returns."

I have attached an excerpt from *Ibbotson Associates Stocks, Bonds, Bills and Inflation: Valuation Edition 2000 Yearbook* as Schedule DAM 36. This is the table from which I obtained the 8.10 percent market risk premium. As one can see from Table C-1 in this exhibit, the risk premium I chose is the *Long-horizon expected equity risk premium*. [Emphasis added]. It reflects the difference between large company total stock returns minus long-term government bond income returns. By not using this number Ms. McKiddy has produced an estimate of the cost of common equity of Empire in her CAPM analysis, which is biased to a low number. In fact, her discussion of risk premium indicates her complete misunderstanding of the concept of market risk.

Q. Please explain.

A. Ms. McKiddy states in her Rebuttal Testimony on page 11, lines 5-7:

> "...Mr. Murry's calculation of market risk premium would be more appropriate for those companies traded on the New York Stock Exchange (NYSE) who are 'unregulated' and subject to more volatility in the market place."

This shows her lack of understanding of the relative market risk of Empire and unregulated firms.

Q. Please explain.

A. On January 3, 2001, Empire lost 20 percent of its market value. The equivalent loss of the Dow-Jones Industrial average would be a two thousand-point drop in five minutes. Although there have been some dramatic swings in the New York Stock exchange, a drop of this magnitude has not occurred.

Q. Why do you say that Ms. McKiddy and Mr. Burdette ignored the instructions of their source and then criticized you for following those same instructions?

A. They both used the source *Ibbotson Associates SBBI 2000 Yearbook*, but in performing a CAPM analysis they ignored the instructions for the use of the data.

Q. Please explain.

A. Ibbotson Associates cautions the users of the publication to adjust their CAPM analysis for a bias associated with company size. For example, Ibbotson Associates states:

> "One of the most remarkable discoveries of modern finance is that of the relationship between firm size and return. The relationship cuts across the

> entire size spectrum but is most evident among smaller companies, which have higher returns on average than larger ones.[1]"

As to calculating a cost of capital using the CAPM methodology, Ibbotson Associates is even more specific, as follows:

> "The firm size phenomenon is remarkable in several ways. First, the greater risk of small stocks does not, in the context of the capital asset pricing model (CAPM), fully account for their higher returns over the long term. In the CAPM, only systematic or beta risk is rewarded; small company stocks have had returns in excess of those implied by their betas.[2]"

As such, Ibbotson Associates develops these adjustments presented in their Table C-1, which I have included as a part of Schedule DAM 36.

Q. You have referred to the instructions of Ibbotson Associates in using the data in their publications. Does the academic literature recognize this size bias and the need for an adjustment in a CAPM analysis?

A. Yes, it does. For example, Roger A. Morin, in his *Regulatory Finance: Utilities' Cost of Capital,* states:

> "Investment risk increases as company size diminishes, all else remaining constant. The size phenomenon is well documented in the finance literature. Empirical studies by Banz (1981) and Reinganum (1981A) have found that investors in small-capitalization stocks require higher returns than predicted by the standard CAPM. Reinganum (1981A) examined the relationship between the size of the firm and its P/E ratio, and found that small firms experienced average returns greater than those of large firms that were of equivalent systematic risk (beta).[3]"

Rolf W. Banz stated in "The Relationship Between Return and Market Value of Common Stocks" *Journal of Financial Economics, 1981.*

---

[1] Ibbotson Associates, "Chapter 5: Firm Size and Return," *Ibbotson Associates' Stocks, Bonds, Bills, and Inflation: Valuation Edition 2000, Yearbook*, (2000, Ibbotson Associates: Chicago, IL), p. 111.
[2] Ibid, p. 118.
[3] Morin, Roger A., "Chapter 13: CAPM Extensions," *Regulatory Finance: Utilities' Cost of Capital*, (1994, Public Utilities Reports, Inc.: Arlington, VA), p.329.

"It is found that smaller firms have had higher risk adjusted returns, on average, than larger firms. This 'size effect' has been in existence for at least forty years and is evidence that the capital asset pricing model is misspecified. The size effect is not linear in the market value; the main effect occurs for very small firms while there is little difference in return between average sized and large firms.[4]"

Moreover, Eugene Fama and Kenneth French in "The Cross-Section of Expected Stock Returns," *Journal of Finance*, June 1992, have summed up the importance of size in a CAPM analysis by concluding that size was more significant even than the beta. Fama and French stated, as follows:

"Two easily measured variables, size and book-to-market equity, combine to capture the cross-sectional variation in average stock returns associated with market beta, size, leverage, book-to-market equity, and earnings-price ratios. Moreover, when the tests allow for variation in beta that is unrelated to size, the relationship between market beta and average return is flat, even when beta is the only explanatory variable.[5]"

Q. Is this size bias and the adjustment important in this case?

A. This is important in this case because both Ms. McKiddy and Mr. Burdette used beta in their CAPM analyses, but ignored the size variable.

Q. Given all of this, how would you characterize Ms. McKiddy and Mr. Burdette's criticism of your CAPM analysis?

A. "Misguided" seems like an adequate description. For example Ms. McKiddy states on page 11 of her Rebuttal Testimony, lines 8-12:

'Finally, Mr. Murry chose to adjust his estimated range of cost of equity by an arbitrary "size premium." It does not appear that Mr. Murry addresses or explains this adjustment in his direct testimony, which calls into question the basis for Mr. Murry's adjustment. Staff believes this "adjustment" is simply a reflection of Mr. Murry's desire to achieve a specific end result.'

---

[4] Banz, Rolf W.; "The Relationship Between Return and Market Value of Common Stocks," *Journal of Financial Economics*, (1981, North-Holland Publishing: Amsterdam), pp. 3-18.

[5] Fama, Eugene F. and Kenneth R. French, "The Cross-Section of Expected Stock Returns," *Journal of Finance*, Vol. XLVII, No. 2 (June 1992), pp. 427-465.

Of course, this statement illustrates how completely she misunderstands the size bias in the CAPM analysis and the need for a compensating adjustment.

Q. Is your "adjustment" as Ms. McKiddy calls it "simply a reflection" of your "desire to achieve a specific end result" as she alleges?

A. Only to the extent that my desired end result is to produce a statistically unbiased estimate of Empire's cost of capital. Consequently, I adhered to the recommendations of Ibbotson & Associates to adjust for the size bias in using these data in a Capital Asset Pricing Model Analysis.

Q. Is there any evidence that the Staff is aware of any size bias in the estimation of the cost of capital?

A. Yes, there is. In Mr. David Broadwater's Rebuttal Testimony before this Commission in Case No. EM-2000-369, he stated on page 15, lines 6 to 13, as follows:

> The merger of Empire, as well as the merger of St. Joseph into Utilicorp will have the effect of lowering Utilicorp's overall risk profile; therefore, the future cash flows should be more certain and less risky requiring a lower discount rate. This discount rate at which future cash flows are discounted is the company's overall cost of capital. In this case, UtiliCorp's cost of capital should be less after the merger than it is prior to the merger, creating additional savings in the area of capital costs.

Q. Is there any additional information that you have received from the Staff since you filed your Rebuttal Testimony that you should wish to respond to in your Surrebuttal Testimony?

A. Yes. Ms. McKiddy has responded to Empire's Data Request No. 36. In this response, she confirmed that there is no 2 percent five-year forecasted earnings per share growth rate as reported in her Schedule 13. Therefore, the correction that I discussed in my Rebuttal Testimony on page 15, and illustrated in my Schedule DAM-24, is proper. Consequently, the correct earnings per share growth rate using her own methodology is 5.23 percent and 6.00 percent as I have illustrated in this schedule. This would increase her DCF estimates using forecasted earnings per share for Empire in her Schedule 13 by a full 2 percentage points.

Q. Did Ms. McKiddy explain this 2 percent error in her forecasted earnings per share growth rate in her response to Empire Data Request No. 36?

A. Yes. In her response to Data Request 36.B she stated the following:

> Mr. Murry is also correct that the 2.00% five-year EPS Growth Rate for Empire District Electric in the Standard and Poor's Stock Guide is for an historical period. However, Staff believes that investors will use historical growth as a reliable predictor of projected growth. This belief can be confirmed by statements made in Staff's source document entitled, "The Cost of Capital-A Practitioner's Guide" at page 8-18, written by David C. Parcell, prepared and published by The Society of Utility and Regulatory Financial Analysts, 1997 Edition. Due to a lack of published projected growth rates, Staff chose to use S&P's historical five-year growth rate as a substitute based on the methodology prescribed in the aforementioned publication.

Q. How do you respond to this statement?

A. This response is misleading for several reasons. First, there was no explanation in Ms. McKiddy's testimony or the schedule that Staff intended to "substitute" historical growth rates for Empire's forecasted growth rates in Schedule 13. Instead, the schedule denoted the 2 percent number as a "5-Year Projected EPS Growth Rate" with a footnote referring to Standard and Poor's EPS growth rates for Empire. Second, it is an erroneous statement that there was a "lack of published projected growth rate" for Empire. Please see my Schedule DAM-12 accompanying my Direct Testimony, which shows a *Value Line* projected earnings per share growth rate of 5.42 percent. Third, Mr. Parcell indicates in his "Guide" at page 8-18 when discussing historical growth rates, "The logic here is that investors rely, *to some extent*, on past rates of growth in making *estimates of future growth*." [Emphasis added.] Reputable forecasts of the future are likely to be better "estimates of future growth" than historical numbers when there are sound reasons to believe that the past does not represent the future.

Q. Does this complete your Surrebuttal Testimony?

A. Yes, it does.

THE COST OF CAPITAL –

A PRACTITIONERS GUIDE

BY

DAVID C. PARCELL

PREPARED FOR THE NATIONAL SOCIETY OF RATE OF RETURN ANALYSTS FOR USE IN THE CERTIFIED RATE OF RETURN ANALYST PROGRAM

1994 EDITION

Author's Note: This manual has been prepared as an educational reference on cost of capital concepts. It is intended for use as a study guide for the 1995 Certified Rate of Return Analyst Program. No cost of equity model or other concept is recommended or emphasized, nor is any procedure for employing any model recommended. Furthermore, no opinions or preferences are expressed by either the author or the National Society of Rate of Return Analysts.

UtiliCorp United Inc's Cost of Capital Including The Empire District Electric Company Normalized Capital Structure

Capital Component	Capital Dollars	Percentage	Cost	Weighted Cost	Tax Factor	Pretax Cost
Common Equity	$0	47.50%	10.75%	5.106%	1.6231	8.288%
Preferred Stock	$0	0.00%	0.00%	0.000%	1.6231	0.000%
Long-term Debt	$0	52.50%	8.18%	4.295%	1.0000	4.295%
Short-term Debt	$0	0.00%	0.00%	0.000%	1.0000	0.000%
Total	$0	100.00%		9.401%		12.583%

UtiliCorp United Inc's Cost of Capital

Capital Component	Capital Dollars	Percentage	Cost	Weighted Cost	Tax Factor	Pretax Cost
Common Equity	$1,525,400,000	39.41%	10.75%	4.237%	1.6231	6.877%
Preferred Stock	$100,000,000	2.58%	8.81%	0.228%	1.6231	0.369%
Long-term Debt	$2,245,100,000	58.01%	8.18%	4.744%	1.0000	4.744%
Short-term Debt	$0	0.00%	0.00%	0.000%	1.0000	0.000%
Total	$3,870,500,000	100.00%		9.209%		11.990%

Cost of Capital Difference	0.592%
Empire's Rate Base	$423,250,645
Dollar Impact / Year	$2,506,682

Source: The Empire District Electric Company's Capital Structrue was taken from UtiliCorp United's Direct Testimony

UtiliCorp United's Capital Structure was taken from UtiliCorp United's response to Data Information Request 3816

Table C-1 **Key Variables in Estimating the Cost of Capital**

	Value
Yields (Riskless Rates)[1]	
Long-term (20-year) U.S. Treasury Coupon Bond Yield	6.8%
Intermediate-term (5-year) U.S. Treasury Coupon Note Yield	6.5
Short-term (30-day) U.S. Treasury Bill Yield	4.9
Fixed Income Risk Premia[2]	
Expected default premium: long-term corporate bond total returns minus long-term government bond total returns	0.2
Expected long-term horizon premium: long-term government bond income returns minus U.S. Treasury bill total returns†	1.4
Expected intermediate-term horizon premium: intermediate-term government bond income returns minus U.S. Treasury bill total returns†	1.1

	Market Benchmark	
	S&P 500	NYSE 1-2
Equity Risk Premia[3]		
Long-horizon expected equity risk premium: large company stock total returns minus long-term government bond income returns	8.1%	7.1%
Intermediate-horizon expected equity risk premium: large company stock total returns minus intermediate-term government bond income returns	8.5	7.5
Short-horizon expected equity risk premium: large company stock total returns minus U.S. Treasury bill total returns†	9.4	8.5
Size Premia[4]		
Expected mid-capitalization equity size premium: capitalization between $918 and $4,200 million	0.2	0.8
Expected low-capitalization equity size premium: capitalization between $252 and $918 million	0.8	1.4
Expected micro-capitalization equity size premium: capitalization below $252 million	2.2	2.7

[1] As of December 31, 1999. Maturities are approximate.

[2] Expected risk premia for fixed income are based on the differences of historical arithmetic mean returns from 1970–1999.

[3] Expected risk premia for equities are based on the differences of historical arithmetic mean returns from 1926–1999.

[4] See Chapter 4 for complete methodology.

† For U.S. Treasury bills, the income return and total return are the same.

Note: Examples of how these variables can be used can be found in Chapter 2, pages 40–43.

Stocks, Bonds, Bills, and Inflation®: Valuation Edition 2000 Yearbook.

Published by:

Ibbotson Associates
225 North Michigan Avenue, Suite 700
Chicago, Illinois 60601-7676
Telephone (312) 616-1620
Fax (312) 616-0404
www.ibbotson.com

ISBN 1-882864-11-5
ISSN 1523-343X