

Exhibit No.	_____
Issue(s)	Rate of Return
Witness	Charles W. King
Type of Exhibit	Surrebuttal Testimony
Sponsoring Party	Public Counsel

## **SURREBUTTAL TESTIMONY**

**OF**

**CHARLES W. KING**

Submitted on Behalf of  
The Office of Public Counsel

**THE EMPIRE DISTRICT ELECTRIC COMPANY**

**Case No. ER-2006- 0315**

August 18, 2006



1  
2 **SURREBUTTAL TESTIMONY OF**  
3 **CHARLES W. KING**

4  
5 **INTRODUCTION**

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8 **Q. PLEASE STATE YOUR NAME, POSITION AND BUSINESS ADDRESS.**

9  
10 A. My name is Charles W. King. I am President of the economic consulting firm of  
11 Snavely King Majoros O'Connor & Lee, Inc. My business address is 1111 14<sup>th</sup>  
12 Street, N.W., Suite 300, Washington, DC 20005.

13  
14 **Q. ARE YOU THE SAME CHARLES W. KING WHO PREVIOUSLY**  
15 **SUBMITTED TESTIMONY IN THIS CASE ON BEHALF OF PUBLIC**  
16 **COUNSEL?**

17  
18 A. Yes. I am.

19  
20 **Q. IS THIS TESTIMONY ALSO SUBMITTED ON BEHALF OF PUBLIC**  
21 **COUNSEL?**

22  
23 A. Yes. It is.

24  
25 **Q. WHAT IS THE OBJECTIVE OF THIS SURREBUTTAL TESTIMONY?**

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27 A. The objective of this surrebuttal testimony is to respond to the criticisms of my  
28 initial direct testimony contained in Dr. VanderWeide's rebuttal testimony. Dr.  
29 VanderWeide criticizes my DCF application, my selection of proxy companies,  
30 and my application of the CAPM. He also attempts to respond to my objections  
31 to his risk premium calculations. I will also comment upon the rebuttal testimony  
32 of Steven M. Fetter.

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**DCF MODEL**

**Q. WHAT ARE DR. VANDERWIEDE’S CRITICISMS OF YOUR DCF APPLICATION?**

A. Dr. VanderWeide objects to what he termed my use of an “annual” DCF model, rather than his quarterly model. He argues that my selection of the next period dividend on the basis of Value Line’s forecast is incorrect, and he claims that the two additional sources I use for forecast earnings growth are inferior to the single source, I/B/E/S, that he uses.

**Q. HAVE YOU ALREADY RESPONDED TO ANY OF THESE CRITICISMS?**

A. Yes. On page 18 of my initial direct testimony, I noted that Dr. VanderWeide’s quarterly compounding procedure is unnecessary because the compounding of earnings occurs outside of the dividend-issuing company.

On pages 17 and 18 of that testimony, I pointed out that the selection of next year’s dividend should take into account the current cash flow situation of the company, so that the analysis does not assume that a cash-strapped company, such as Empire, would increase its dividend. Value Line would make the requisite analysis in forecasting next year’s dividend. Dr. VanderWeide’s mechanical application of the “g” factor does not.

Finally, on page 18 of my direct testimony I argued that it is appropriate to use a greater range of analysts in estimating the proxy group’s earnings growth rates.

**Q. HAS DR. VANDERWIEDE PRODUCED ANY FURTHER REBUTTAL TO THESE POSITIONS?**

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A. Yes. Dr. VanderWeide alleges that I/B/E/S' forecasts are generally considered superior to Zacks' growth forecasts because they include a greater number of analysts' forecasts on average. Dr. VanderWeide asserts that they are considered superior to Value Line's forecasts because they are based on "normalized current earnings" while Value Line uses a three-year average as a base.

**Q HOW DO YOU RESPOND TO THESE CRITICISMS?**

A. Dr. VanderWeide has provided no evidence to support his assertion that I/B/E/S surveys more analysts' forecasts than Zacks, and I have been unable from the materials at my disposal to verify this assertion one way or another. It seems somewhat obvious, however, that it is better to use more forecasts than less. As regards Value Line, I do not see why I/B/E/S' normalized current earnings base is necessarily superior to Value Line's three year average earnings base, assuming that this distinction exists at all – which I question. It is my understanding that I/B/E/S is a survey of analysts' forecasts, and those analysts may use a variety of bases.

I should note that Dr. VanderWeide appears to cherry-pick his sources. He does not like Value Line for its earnings forecasts, but he greatly prefers it for its estimation of beta. I/B/E/S is his preferred source of earnings forecasts, but Dr. VanderWeide believes that its betas are worthless. In contrast, I use three sources – I/B/E/S, Zacks and Value Line for both earnings forecasts and betas.

**PROXY COMPANIES.**

**Q. WHAT DOES DR. VANDERWEIDE HAVE TO SAY WITH RESPECT TO YOUR SELECTION OF PROXY COMPANIES?**

1 A. As regards my broad group, Dr. VanderWeide objects to my elimination of  
2 companies primarily in the gas distribution business and to my exclusion of MDU  
3 Resources because it is only marginally in the electric utility business. He  
4 opposes my discarding TXU on the basis of its very small book equity percentage.

5

6 Dr. VanderWeide sees no point in my limiting my “narrow group” to companies  
7 that derive 75 percent or more of their revenue from regulated utility service. He  
8 claims that his proxy group has the same business risk as Empire by reason of  
9 their bond rating and their Value Line safety ratings. He asserts that the larger the  
10 proxy group the better.

11

12 **Q. HOW DO YOU RESPOND TO DR. VANDERWEIDE’S CRITICISMS OF**  
13 **YOUR EXCLUSIONS FROM THE BROAD GROUP?**

14

15 A. I do not agree with Dr. VanderWeide. The objective of the proxy group is to find  
16 financially healthy companies that are as similar to Empire as possible. Gas  
17 distribution companies are not similar to Empire because they are in a different  
18 business and thus have different business risks. Dr. VanderWeide’s own analyses  
19 show that the gas distribution business is perceived by investors as less risky than  
20 the electric utility business. Had I included the four companies that are primarily  
21 in gas distribution, my DCF rate of return would be lower, a result that would be  
22 detrimental to Empire.

23

24 MDU Resources is primarily involved in unregulated activities, such as gas and  
25 oil exploration, that are intrinsically more risky than the electric utility business.  
26 It is therefore not comparable to Empire.

27

28 Dr. VanderWeide is correct that TXU’s market equity is not nearly as low as its  
29 book equity. However, to the extent that TXU is subject to rate-base/rate-of-  
30 return regulation, its very low book equity ratio will pose problems. As I

1 explained in my initial direct testimony, regulators must use book values for  
2 equity and debt because otherwise regulation becomes circular. If the Texas  
3 commission uses TXU's book equity in setting that company's retail utility rates,  
4 the overall cost of capital would be quite low, and the likelihood that the company  
5 would regain a healthier capital structure would be compromised. I therefore  
6 consider TXU to be riskier than Empire.

7

8 **Q. HOW DO YOU RESPOND TO DR. VANDERWEIDE'S CRITICISM OF**  
9 **YOUR NARROW GROUP SELECTION?**

10

11 A. First of all, I should note that regulated utilities are intrinsically less risky than  
12 non-regulated enterprises. That is because regulated utilities enjoy a monopoly  
13 position in their markets, which is why they are regulated, and they have a  
14 constitutional right to have rates set based on prudent costs, including return on  
15 investment, thus providing them an opportunity to earn a reasonable rate of return.  
16 These observations were confirmed in a recent Moody's Credit Opinion on  
17 Baltimore Gas & Electric, which contained the following statement:

18

19 Under Moody's Rating Methodology for Global Regulated  
20 Electric Utilities, we have tended to view regulated  
21 businesses as having lower business risk profiles compared  
22 to unregulated or competitive businesses.

23

24

25 But the most important distinction between regulated and unregulated companies  
26 has to do with how their rates are set. Unregulated companies set their rates and  
27 prices based on the market. These market-driven prices have no relation whatever  
28 to the capital structure of the company or the book value of its equity. By  
29 contrast, the prices for regulated activities are set through the regulatory process  
30 which applies an authorized rate of return to the book value of the companies'  
31 regulated assets. For unregulated companies, the book value of equity has no  
32 particular meaning to an investor or investment analyst. To regulated companies,

1 book equity value is one of the two determinants of profitability, the other being  
2 the rate of return.

3  
4 By limiting my narrow group to regulated companies, I render irrelevant Dr.  
5 VanderWeide's final subjective adjustment for the allegedly higher financial risk  
6 of Empire vis-à-vis the proxy group of companies. Dr. VanderWeide contends  
7 that because Empire's allowed return is based on the book value of its equity, and  
8 investors examine only market value, it is necessary to adjust Empire's return for  
9 the greater leverage of its book equity capital structure relative to the market  
10 value capital structure of the proxy group.

11  
12 Whatever the validity of Dr. VanderWeide's rationale when comparing Empire to  
13 unregulated companies, it becomes totally irrelevant when Empire is compared to  
14 a group of companies that are regulated in the same manner as Empire. The  
15 earnings of all of these companies are based on book equity value, and investors  
16 know it. They may be willing to buy the stocks at prices higher than book value,  
17 but that is just their recognition of the potential for future growth – the “g” factor  
18 in the DCF formula. Investors know that for all the companies in my narrow  
19 group, book equity is the basis for allowed return. Dr. VanderWeide's adjustment  
20 becomes not only moot but also inappropriate for a regulated entity.

21  
22 **CAPM**

23  
24 **Q. AT PAGE 40 OF HIS REBUTTAL TESTIMONY, DR. VANDERWEIDE**  
25 **ASSERTS THAT YOU USED THE WRONG LONG-TERM TREASURY**  
26 **BOND RATE IN PERFORMING YOUR CAPM TEST. IS HE CORRECT?**

27  
28 **A.** No. Dr. VanderWeide claims that long-term nominal Treasury bond rates have  
29 increased from the 5.17 percent I use in my initial direct testimony to 5.3 percent  
30 and that they are forecast to increase further to 5.5 percent. I do not know where



1 Dr. VanderWeide obtained his July interest rates, but the Federal Reserve series  
2 H-11 shows that the yield on 30-year Treasury bonds was 5.04 percent during the  
3 week of August 11, and the yield on 20-year Treasuries was 5.13 percent. The  
4 failure of these interest rates to increase during the summer of 2006 casts  
5 considerable doubt on Dr. VanderWeide's forecast yield of 5.5 percent.

6  
7 **Q. AT PAGE 41 OF HIS REBUTTAL TESTIMONY, DR. VANDERWEIDE**  
8 **OBJECTS TO YOUR USE OF I/B/E/S AND ZACKS BETAS. WHAT IS**  
9 **THE BASIS FOR THIS OBJECTION?**

10  
11 A. In my application of the CAPM methodology, I use an average of the proxy  
12 companies' betas from three sources, Value Line, I/B/E/S, and Zacks. Dr  
13 VanderWeide objects to my inclusion of I/B/E/S and Zacks' betas in this average  
14 on the grounds that these betas are not "adjusted."

15  
16 The adjustment to which Dr. VanderWeide refers is the addition of .25 to the  
17 "raw" beta, which is the degree of co-variance in the price fluctuations of the  
18 stock at issue relative to the total market. I know that Value Line applies this  
19 adjustment, and I suspect that I/B/E/S does also, because none of its betas are  
20 below .25. Zacks does not apply this adjustment. If this is the case, then my  
21 average beta is two-thirds weighted in favor of adjusted betas.

22  
23 **Q. IS THIS ADJUSTMENT APPROPRIATE?**

24  
25 A. This question underscores my misgivings with the whole concept of CAPM, as  
26 described in my initial direct testimony. I seriously question whether the  
27 adjustment is appropriate. I understand that this adjustment is based on a paper  
28 titled "On Assessment of Risk" by Marshall Blume that was published in the  
29 *Journal of Finance* in March 1971. In that paper, Dr. Blume examined the  
30 tendency of the betas of portfolios of stocks over time, and he found that the betas

1 of these portfolios tended toward 1.0. The average adjustment for this tendency is  
2 .25 in the portfolio's beta.

3  
4 It is not clear that this tendency of portfolios of stocks to move in the direction of  
5 1.0 applies either conceptually or mathematically to individual stocks. For this  
6 reason, I am not persuaded that the adjustment to the betas is altogether  
7 appropriate. I must agree, however, that the adjustment avoids the counter-  
8 intuitive observation of negative betas (see, for example, the  $-.05$  Zacks' beta for  
9 the Southern Company). The problem of negative betas is a conceptual and  
10 mathematical difficulty with the concept of beta itself, not necessarily with its  
11 computation. It partially explains my misgivings with the whole concept of  
12 CAPM, as described in my initial direct testimony.

13  
14 **Q. AT PAGE 42 OF HIS REBUTTAL TESTIMONY, DR. VANDERWEIDE**  
15 **ASSERTS THAT THE FCC WIRELINE COMPETITION BUREAU HAS**  
16 **RELIED ON THE CAPM TO ESTIMATE ITS COST OF EQUITY. HAVE**  
17 **YOU ANY COMMENT?**

18  
19 **A.** Yes. In its Virginia Arbitration Order of 2003, the FCC's Wireline Competition  
20 Bureau did indeed favor CAPM over the DCF models. However, the detailed  
21 discussion in the Order reveals that the rejection of DCF had less to do with its  
22 conceptual problems than with the selection of comparison groups and the  
23 specific growth rate projections provided by the contesting parties, Verizon and  
24 AT&T/Worldcom. In that specific case, the Bureau found that the CAPM  
25 involved less controversy than did the DCF given the evidence presented in the  
26 case.<sup>1</sup> However a review of prior Bureau cases does not indicate that CAPM was  
27 the favored method.

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<sup>1</sup> *Memorandum Opinion and Order*, CC Docket Nos. 00-218, 00-251, DA 03-2738 (Aug. 29, 2003)  
(*Virginia Arbitration Order*) ¶¶ 71-76.

1 **RISK PREMIUM ANALYSES**

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3 **Q. WHAT HAS DR. VANDERWEIDE TO SAY IN SUPPORT OF HIS “EX**  
4 **ANTE” RISK PREMIUM ANALYSIS?**

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6 A. Dr. VanderWeide repeats his purported justification for this approach as stated in  
7 his initial testimony. First, he claims that the DCF results for the electric  
8 companies have displayed considerable volatility over the last several years.  
9 Second, he claims that the DCF results for electric companies deviate  
10 significantly from the cost of equity results obtained from other widely used  
11 equity methodologies. He contends that the Ex Ante risk premium approach  
12 smoothes out the unreasonable fluctuations in DCF results by examining both  
13 DCF results over a longer period of time and the relationship between DCF  
14 results and interest rates.

15  
16 **Q. HAVE THERE BEEN UNREASONABLE FLUCTUATIONS IN THE DCF**  
17 **RESULTS DURING THE PAST FEW YEARS?**

18  
19 A. No. Dr. VanderWeide’s own work papers show that over the three years from  
20 November 2002 through November 2005, his DCF results for the electric industry  
21 have varied by only 1.13 percent, from a low of 9.93 percent in August 2005 to a  
22 high of 11.06 percent at the very beginning of the period, November 2002.  
23 Moreover, these results declined steadily during the period covered by his  
24 calculations, which ended in November 2005. During the 13 months November  
25 2002 through November 2003, the average DCF indication was 10.75 percent.  
26 Between November 2003 and November 2004, the average was 10.41 percent,  
27 and between November 2004 and November 2005, it was 9.92 percent.

28  
29 None of these indications support the 11.1 percent Dr. VanderWeide purports to  
30 conclude from his Ex Ante analysis. Indeed, all of the indications since October

1 2002 lie below that value. Yet, these very indicators are one of the two principal  
2 inputs to this analysis. The result is a flat-out contradiction between inputs and  
3 output.

4

5 **Q. DOES DR. VANDERWEIDE RESPOND TO YOUR CRITICISM OF HIS**  
6 **EX POST RISK PREMIUM ANALYSIS?**

7

8 A. Dr. VanderWeide responds only to the conceptual argument that realized risk  
9 premiums do not necessarily translate to expected returns. He does not address  
10 the statistical weakness that the variations of these experienced returns far exceed  
11 the average.

12

13 As for the conceptual argument, Dr. VanderWeide's batter analogy is instructive.  
14 If a batter has an average of .300, or if all batters collectively have had an average  
15 of .250 during the past 69 years, these numbers cannot be used to predict the  
16 batting average of any one batter or of all batters collectively in the next year.  
17 Yet, that is the explicit assumption of Dr. VanderWeide's Ex Post analysis.

18

19 **Q. WHAT IS THE SUBJECT OF STEVEN FETTER'S REBUTTAL**  
20 **TESTIMONY?**

21

22 A. Empire witness Steven Fetter discusses the Commission's regulatory plan and its  
23 relationship to the recovery of fuel and purchases power costs.

24

25 **Q. WHAT HAS MR. FETTER TO SAY ABOUT THIS ISSUE?**

26

27 A. Mr. Fetter argues that the regulatory plan does not substitute for a fuel adjustment  
28 clause that would allow Empire to recover its prudently incurred fuel and  
29 purchased power costs. He argues that failure to recover these costs could still  
30 result in a negative reassessment of Empire's operational risk by credit rating

1 agencies, with the result that stronger ratios would be needed to maintain  
2 Empire's investment-grade status. At worst, argues Mr. Fetter, qualitative rating  
3 factors could become so negative that the Company's adequate financial ratios  
4 might not be sufficient to keep it from falling into non-investment-grade status.

5

6 **Q. IS THERE ANY REASON TO BELIEVE THAT MR. FETTER IS**  
7 **OVERSTATING THE IMPORTANCE OF A FUEL AND PURCHASED**  
8 **POWER COST RECOVERY MECHANISM?**

9

10 A. Yes. The rebuttal testimony of Staff witness Mark Oligschlaeger indicates that  
11 the Company may have an inappropriately restrictive view of the relief available  
12 from the regulatory plan. Mr. Oligschlaeger cites the testimony of Empire  
13 witness William Gipson in which Mr. Gipson appears to reject the idea of using  
14 the mechanism of regulatory plan amortizations to offset unforeseen fuel and  
15 purchase power expenses.

16

17 Mr. Oligschlaeger states that this view is incorrect. The regulatory plan is  
18 intended to provide Empire with sufficient cash flows to prevent a downgrading.  
19 This objective applies regardless of the source of the cash flow deterioration.

20

21 It appears that Mr. Fetter has adopted Mr. Gipson's erroneous view of the scope  
22 of the regulatory plan amortizations. Specifically, he fails to recognize that the  
23 purpose of the plan is to provide Empire with the opportunity to maintain its debt  
24 rating by providing adequate cash flows. The determination of necessary cash  
25 flows is made after all prudent regulatory costs, including fuel and purchase  
26 power have been determined. That is the purpose of the regulatory plan.

27

28 **Q. DOES THIS COMPLETE YOUR SURREBUTTAL TESTIMONY?**

29

30 A. Yes. It does.