

EXHIBIT

Exhibit No.:
Issue(s):
Witness:
Type of Exhibit:
Sponsoring Party:
Case Number:
Date Testimony Prepared:

Rate of Return
Charles W. King
Direct
Public Counsel
ER-2006-00315
June 23, 2006

DIRECT TESTIMONY

OF

CHARLES W. KING

FILED

SEP 29 2006

Missouri Public
Service Commission

Submitted on Behalf of
the Office of the Public Counsel

THE EMPIRE DISTRICT ELECTRIC COMPANY

Case No. ER-2006-0315

June 23, 2006

Public
counsel
Exhibit No. 72
Case No(s). ER-2006-0315
Date 9-05-06 Rptr PF

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of the Empire District Electric)
Company of Joplin, Missouri for Authority)
to File Tariffs Increasing Rates for Electric)
Service Provided to Customers in the)
Missouri Service Area of the Company)


Case No. ER-2006-0315

AFFIDAVIT OF CHARLES KING

CITY OF WASHINGTON)
) ss
DISTRICT OF COLUMBIA)

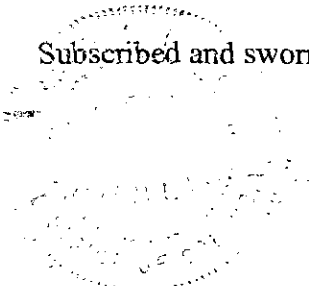
Charles King, of lawful age and being first duly sworn, deposes and states:

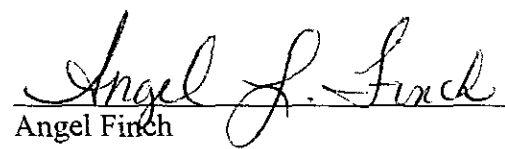
1. My name is Charles King. I am a Public Utility Consultant for the Office of the Public Counsel.
2. Attached hereto and made a part hereof for all purposes is my direct testimony consisting of pages 1 through 31; Attachments A and B; and Schedules CWK-1 through CWK-8.
3. I hereby swear and affirm that my statements contained in the attached testimony are true and correct to the best of my knowledge and belief.



Charles King
Public Utility Consultant

Subscribed and sworn to me this 16th day of June 2006.





Angel Finch
Notary Public

My commission expires *March 14, 2011*

CONTENTS

Qualifications.....	1
Summary.....	2
Capital Structure.....	3
Cost of Debt.....	8
Standards for Finding Equity Capital Cost.....	9
Discounted Cash Flow Procedure.....	11
Capital Asset Pricing Model.....	20
Risk Premium Approaches.....	24
Equity Return Conclusion.....	27
Attachment A.....	Resume of Charles W. King
Attachment B.....	Appearances of Charles W. King before Regulatory Agencies
<u>Exhibit:</u>	
Schedule CWK-1.....	Empire District Electric Co. Cost of Capital
Schedule CWK-2.....	VanderWeide Electric Utility Comparison Group 2005 Revenues by Source
Schedule CWK-3.....	Electric Utility Comparison Companies – Broad Group Capital Structures
Schedule CWK-4.....	Electric Utility Comparison Companies – Narrow Group Capital Structures
Schedule CWK-5.....	Electric Utility Comparison Companies – Narrow Group “Classic” Discounted Cash Flow Analysis
Schedule CWK-6.....	Electric Utility Comparison Companies – Broad Group “Classic” Discounted Cash Flow Analysis
Schedule CWK-7.....	Electric Utility Comparison Companies – Narrow Group Selected Utility Beta Values, June 2006

Schedule CWK-8.....Electric Company Comparison Group
Capital Asset Pricing Model

1
2
3 **DIRECT TESTIMONY OF**
4 **CHARLES W. KING**

5 **QUALIFICATIONS**

6
7 **Q. PLEASE STATE YOUR NAME, POSITION AND BUSINESS ADDRESS.**

8
9 A. My name is Charles W. King. I am President of the economic consulting firm of Snavelly
10 King Majoros O'Connor & Lee, Inc. ("Snavelly King"). My business address is 1111 14th
11 Street, N.W., Suite 300, Washington, D.C. 20005.

12
13 **Q. PLEASE DESCRIBE SNAVELLY KING.**

14
15 A. Snavelly King, formerly Snavelly, King & Associates, Inc., was founded in 1970 to
16 conduct research on a consulting basis into the rates, revenues, costs and economic
17 performance of regulated firms and industries. The firm has a professional staff of 12
18 economists, accountants, engineers and cost analysts. Most of its work involves the
19 development, preparation and presentation of expert witness testimony before federal and
20 state regulatory agencies. Over the course of its 36-year history, members of the firm
21 have participated in over 1000 proceedings before almost all of the state commissions
22 and all Federal commissions that regulate utilities or transportation industries.

23
24 **Q. HAVE YOU PREPARED A SUMMARY OF YOUR QUALIFICATIONS AND**
25 **EXPERIENCE?**

26
27 A. Yes. Attachment A is a summary of my qualifications and experience.

28
29 **Q. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY IN REGULATORY**
30 **PROCEEDINGS?**

1 A. Yes. Attachment B is a tabulation of my appearances as an expert witness before state
2 and federal regulatory agencies.
3

4 **Q. FOR WHOM ARE YOU APPEARING IN THIS PROCEEDING?**
5

6 A. I am appearing on behalf of the Office of the Public Counsel for the State of Missouri.
7

8 **Q. WHAT IS THE OBJECTIVE OF YOUR TESTIMONY?**
9

10 A. The objective of my testimony is to recommend the appropriate rate of return to capital
11 devoted to the retail electric utility services of the Empire District Electric Company
12 (“Empire” or “the Company”).
13

14 **SUMMARY**
15

16 **Q. PLEASE SUMMARIZE THE ANALYSES YOU PRESENT IN THIS**
17 **TESTIMONY.**
18

19 A. I first consider Empire’s capital structure, restating it to March 31, 2006. As part of this
20 restatement, I include net short-term debt in excess of construction work in progress. I use
21 the long-term debt cost presented by the company in its original filing, which may have to
22 be updated. I use the Company’s stated cost of short-term debt cost for March 2006.
23 Finally, I use the cost of equity that I find in this testimony.
24

25 I estimate Empire’s return on equity by applying the Discounted Cash Flow (“DCF”)
26 procedure, which I consider the most credible test of market return, to two groups of
27 comparison electric companies. The first group, which I term the “narrow group,”
28 consists of 16 electric companies that derive over 75 percent of their revenue from
29 regulated utility services. I consider this group most comparable to Empire, which
30 generated 93.2 percent of its 2005 revenue from regulated electric service. The “broad
31 group” includes 26 electric companies, inclusive of the 16 narrow group firms, that derive

1 most of their revenue from electric service, although in 10 cases much of this revenue is
2 from unregulated merchant generation and marketing activities. As a check on my DCF
3 results, I present the results of my application of the Capital Asset Pricing Model
4 ("CAPM). Finally, I critique the two risk premium models offered by Empire's rate-of-
5 return witness, James VanderWeide.

6
7 **Q. WHAT HAVE YOU FOUND TO BE THE APPROPRIATE RATE OF RETURN**
8 **FOR EMPIRE?**

9
10 A. Based on the analyses presented in this testimony, I find that the appropriate after-tax
11 return to the Empire's electric utility rate base is **8.19 percent**. This recommendation
12 reflects the application of a **9.65 percent** return on Empire's equity capital within the
13 Company's March 31, 2006 capital structure.

14
15 **Q. DO YOU HAVE A SCHEDULE THAT DISPLAYS THE DEVELOPMENT OF**
16 **THIS RECOMMENDED RATE OF RETURN?**

17
18 A. Yes. Schedule CWK-1 of my exhibit presents the calculation of my recommended rate
19 of return. The schedule shows Empire's capital structure as of March 31, 2006 as
20 presented in the Company's Form 10-Q to the Securities and Exchange Commission
21 ("SEC"). It also shows the cost rate for each form of capital and the weighted return. The
22 bottom of the schedule shows my calculation of the amount of net short-term debt, which
23 I shall discuss in the next section of my testimony.

24
25 **CAPITAL STRUCTURE**

26
27 **Q. WHAT IS MEANT BY "CAPITAL STRUCTURE?"**

28
29 A. Capital structure refers to the mix of the various forms of investor-supplied capital,
30 including long-term debt, short-term debt, preference stock and common equity.

1
2 **Q. WHAT IS THE RELEVANCE OF CAPITAL STRUCTURE TO THE OVERALL**
3 **RATE OF RETURN?**

4
5 A Capital structure is highly relevant to the overall rate of return because the cost of the
6 respective forms of capital varies considerably. In general, debt capital is much less
7 costly than equity capital, not only because it requires a lower return, but because interest
8 on debt is tax-deductible. Equity capital is more costly because it bears more risk. Since
9 the return on equity – dividends and retained earnings – is not tax deductible, equity
10 capital also affects ratemaking by requiring a gross-up for income taxes.

11
12 Standing alone, these considerations would suggest that debt capital is always preferable
13 to equity, but debt has limits. As the proportion of debt increases, the financial risk that
14 the Company might not be able to honor its debt instruments also increases. At some
15 point, that risk overwhelms the benefit of lower debt costs, and the capital structure
16 becomes too “leveraged,” that is, it has too much debt for the earnings to sustain. In
17 theory, there is a balanced mix of debt and equity that minimizes the composite cost of
18 capital. Finding that balance is a major challenge to most companies, and particularly to
19 companies in capital-intensive industries such as electric utilities.

20
21 **Q. WHAT IS THE APPROPRIATE CAPITAL STRUCTURE TO USE IN**
22 **CALCULATING THE COST OF EMPIRE’S CAPITAL DEVOTED TO**
23 **ELECTRIC UTILITY SERVICE?**

24
25 A. The appropriate capital structure is a mix of debt and equity that would be employed by
26 prudent management in a company devoted exclusively electric utility service.

27
28 **Q. WHAT IS EMPIRE’S CAPITAL STRUCTURE?**
29

1 A. Empire's capital structure is shown in the first two columns of Schedule CWK-1. The
2 amount of long-term debt and equity is taken directly from page 7 of Empire's Form 10-
3 Q to the SEC for the quarter ended March 31, 2006. I have included both the stated long-
4 term debt and the very small amount of long-term debt that will mature within a year,
5 classified in the balance sheet as a short-term liability.

6
7 Empire's Form 10-Q shows that short-term debt as of March 31, 2006 was \$46 million.
8 This value is an overstatement of the short-term debt that should be included in the
9 capital structure for purposes of computing return on rate base. That is because some of
10 the short-term debt may support Construction Work in Progress (CWIP). Both the CWIP
11 and the carrying cost of that CWIP are capitalized and later recovered in depreciation on
12 the plant constructed. Accordingly, I have reduced the Company's March 31, 2006 short-
13 term debt by the amount of CWIP outstanding as of that date. The result is a net short-
14 term debt amount of \$32,857,000. This figure may have to be updated to reflect the
15 Commission Staff's calculation of Empire's working capital.

16
17 **Q. IS EMPIRE'S CAPITAL STRUCTURE APPROPRIATE UNDER THE**
18 **STANDARD YOU HAVE CITED?**

19
20 A. Yes, I believe it is.

21
22 **Q. HAVE YOU PERFORMED ANY ANALYSES TO CONFIRM THAT EMPIRE'S**
23 **CAPITAL STRUCTURE IS CONSISTENT WITH THAT OF WELL-MANAGED**
24 **ELECTRIC UTILITIES?**

25
26 A. Yes. I have compared Empire's capital structure with the capital structures of two
27 comparison groups of electric utility companies.

28
29 **Q. HOW DID YOU SELECT YOUR TWO COMPARISON GROUPS OF ELECTRIC**
30 **UTILITIES?**

1
2 A. I began with the list of 34 companies that Empire's witness James VanderWeide used for
3 comparison purposes to Empire. This list is found on the second page of Dr.
4 VanderWeide's Schedule JWV-1. According to Dr. VanderWeide, this list consists of
5 Value Line's electric utility companies that (1) paid dividends during every quarter of the
6 last two years; (2) did not decrease dividends during any quarter of the past two years; (3)
7 had at least three analysts included in the I/B/E/S mean growth forecast; (4) have an
8 investment grade bond rating and a Value Line Safety Rank of 1, 2, or 3; and (5) have not
9 announced a merger.

10
11 Based on Dr. VanderWeide's own criteria, it was necessary to exclude two of the
12 companies on his list. On December 18, 2005, Constellation Energy and the FPL Group
13 agreed to a plan of merger. This agreement renders these companies ineligible for
14 inclusion under the fifth of Dr. Vanderweide's criteria.

15
16 I then examined the 2005 10K reports of the 32 remaining companies to determine how
17 much of their revenue was derived from regulated electric utility service. The results of
18 this analysis are set forth on Schedule CWK-2 of my exhibit. I found that four
19 companies on Dr. VanderWeide's list are more heavily involved in gas distribution than
20 electric service and that one Company, MDU Resources, is most heavily involved in non-
21 utility activities, including construction, mining, and gas and oil production. Therefore I
22 have excluded them for all purposes of my analysis.

23
24 I also excluded TXU Corporation, which recently took some extraordinary equity write-
25 downs and now shows an equity percentage of approximately 3.5 percent. Because of
26 TXU's extremely leveraged condition, I have excluded it from the analyses presented in
27 this testimony.

28
29 I then examined the proportion of revenue of each company that is non-regulated relative
30 to that which is subject to regulation. I found that in 2005 Empire derived 93.2 percent of

1 its revenue from regulated electric service. Many of the companies listed as electric
2 utilities derive very significant proportions of their revenue from non-regulated merchant
3 power production and marketing. I therefore established a threshold of 75 percent
4 regulated electric utility revenue as the basis for establishing what I call the "narrow
5 group" of electric utilities whose revenues are primarily determined by regulation. The
6 result of this effort was two groups, a broad group of 26 companies and a narrow group
7 of 16 companies.

8
9 The final step in this analysis was to identify the capital structures of each of these
10 companies, again using their SEC Forms 10-K as the source. The results of this effort are
11 set forth in Schedules CWK-3 for the broad group and CWK-4 for the narrow group.
12 Exhibit CWK-3 reveals that the broad group has an average equity percentage of total
13 capital (inclusive of short-term debt) of 44.5 percent and of permanent capital (exclusive
14 of short-term debt) of 46.2 percent. These percentages are slightly lower than Empire's
15 equity percentages of 46.4 percent and 48.4 percent, respectively. Exhibit CWK-4,
16 which applies to the utilities most similar to Empire, shows a similar relationship. The
17 narrow group's equity percentage of total capital is 45.15 percent, as compared with
18 Empire's 46.43 percent. Its equity percentage of the narrow group's permanent capital is
19 46.74 percent compared with Empire's 48.36 percent.

20
21 Based on this analysis, I believe that Empire's capital structure is appropriate and
22 reasonable for determining its cost of capital and return on rate base, even though
23 Empire has a slightly greater equity proportion than the comparison groups, which
24 suggests a slightly lower level of financial risk.

25
26 **Q. WHAT DEFINITION OF EQUITY HAVE YOU USED IN YOUR SCHEDULES,**
27 **BOOK VALUE OR MARKET VALUE?**

28
29 **A.** I have used book value consistently.
30

1 Q. AT PAGES 9 AND 10 OF HIS TESTIMONY, DR. VANDERWEIDE ARGUES
2 THAT INVESTORS DO NOT LOOK AT BOOK EQUITY, BUT RATHER AT
3 MARKET EQUITY. HOWEVER, AT THE BOTTOM OF PAGE 10, HE
4 CONCEDES THAT REGULATORS HAVE TRADITIONALLY DEFINED THE
5 WEIGHTED COST OF CAPITAL USING BOOK VALUES OF BOTH DEBT
6 AND EQUITY. WHY DO REGULATORS USE BOOK VALUES, RATHER
7 THAN MARKET VALUES?
8

9 A. The reason is to avoid circularity. Market values depend on earnings, and the earnings of
10 a regulated enterprise depend on the rate of return set by the regulators. If that rate of
11 return is in turn affected by the level of market value, the whole process becomes
12 circular.
13

14 This issue was addressed by the Supreme Court when it reviewed the use of book value
15 versus "fair value," which may be measured as market value, in its landmark *Hope*
16 *Natural Gas* case.

17 ... "fair value" is the end product of the process of rate-making not
18 the starting point as the Circuit Court of Appeals held. The heart
19 of the matter is that rates cannot be made to depend upon "fair
20 value" when the value of the going enterprise depends on earnings
21 under whatever rates may be anticipated.
22

23 **COST OF DEBT**
24

25 Q. WHAT COSTS HAVE YOU ASSIGNED TO THE DEBT COMPONENTS OF
26 EMPIRE'S CAPITAL STRUCTURE?
27

28 A. I do not have a current calculation of the cost of Empire's long-term debt, so I have
29 adopted the cost rate of 7.04 percent shown in Empire's Schedule H-1, sponsored by W.
30 Scott Keith. According to Mr. Keith, the cost of long-term debt on September 30, 2005

¹ *Federal Power Commission et. al vs. Hope Natural Gas Company*, 320 U.S. 592, at 601 (1944)

1 was 7.04 percent. This value should be updated if there has been any significant change
2 since last September.

3
4 I have used 5.59 percent as the cost of short-term debt. This was the cost as of March
5 2006 as reported in Empire's response to my Data Request No. 4013.

6
7 **STANDARDS FOR FINDING EQUITY CAPITAL COST**

8
9 **Q. WHAT IS THE BASIS FOR FINDING A RATE OF RETURN TO EMPIRE'S**
10 **COMMON EQUITY SHAREHOLDERS?**

11
12 A. In its *Hope Natural Gas* decision, the United States Supreme Court established the
13 following standards for the return on equity that must be allowed a regulated public utility:

14 ..the return to the equity owner should be commensurate with the
15 returns on investments in other enterprises having corresponding
16 risks. That return, moreover, should be sufficient to assure
17 confidence in the financial integrity of the enterprise, so as to
18 maintain its credit and to attract capital.²

19
20 It can be seen from this excerpt that there are essentially three standards for determining
21 an appropriate return on equity. The first is the "comparable earnings" standard, i.e., that
22 the earnings must be "commensurate with the returns on investments in other enterprises
23 having corresponding risks." The second is that earnings must be sufficient to assure
24 "confidence in the financial integrity of the enterprise," and the third is that they must
25 allow the utility to attract capital.

26
27 **Q. HOW CAN THE COMPARABLE EARNINGS STANDARD BE APPLIED IN**
28 **ESTIMATING THE RATE OF RETURN ON EQUITY CAPITAL?**
29

² Id. at 603

1 A. There is a certain circularity to the comparable earnings standard because the competitive
2 nature of the capital markets virtually ensures that the returns to all enterprises having
3 corresponding risks are comparable with each other. Investors establish the price of each
4 traded stock based on that stock's present and prospective earnings in comparison with the
5 present and prospective earnings of all other stocks and other investments available to
6 them. If the earnings of a firm are depressed, then investors will pay only a low price for
7 that firm's stock. As a result, the return on the market value of that stock will be
8 comparable to the return on the market value of the stock of other companies that are
9 highly profitable but which, as a consequence of their profitability, have been bid up to a
10 very high price. Thus, if "return" is defined as the earnings of an equity investment
11 relative to its current market price, then the comparable earnings test becomes a cipher.
12 All returns are comparable with all other returns.

13
14 In public utility regulation the conventional procedure for resolving this circularity is to
15 identify the required equity return based on the market value of a utility's stock. That
16 return is combined with the cost of debt and preferred stock, using either the actual or a
17 hypothetical minimum-cost capital structure. The blended return to total capital is then
18 applied to a rate base reflective of the book value of the utility's investment. The book
19 value is the accountant's quantification of the original cost of the utility's assets adjusted
20 for ratepayer contributions such as deposits and deferred taxes. Under this procedure, the
21 market price of a stock is used only to determine the return that investors expect from that
22 stock. That expectation is then applied to the book value of the utility's investment to
23 identify the level of earnings that regulation will allow the utility's common shareholders
24 to recover.

25
26 **Q. HOW CAN THE FINANCIAL INTEGRITY AND CAPITAL ATTRACTION**
27 **STANDARDS BE APPLIED IN ESTIMATING THE RATE OF RETURN ON**
28 **EQUITY CAPITAL?**

29
30 A. If a utility can earn a return on its investment comparable to that required by enterprises of
31 comparable risk, then it should have no difficulty in attracting capital and maintaining

1 credit. Investors would have no reason to shun such a utility in favor of other investment
2 opportunities. Thus, if the comparable earnings test is met, then the financial integrity and
3 capital attraction standards are met as well.
4

5 **Q. HOW DO YOU DEFINE “ENTERPRISES OF COMPARABLE RISK” AS**
6 **REQUIRED BY *HOPE NATURAL GAS*?**
7

8 A. I propose to use the two lists of companies in Schedules CWK-2 and CWK-3. The narrow
9 group has 16 companies, all of which derive at least 75 percent of their revenue from
10 regulated electric utility service. The broad group has 26 companies consisting of the
11 narrow group companies plus 10 additional companies that are heavily involved in
12 unregulated merchant electric generation and marketing.
13

14 **DISCOUNTED CASH FLOW PROCEDURE**
15

16
17 **Q. PLEASE DESCRIBE THE DISCOUNTED CASH FLOW PROCEDURE.**
18

19 A. The basic premise of the Discounted Cash Flow (“DCF”) procedure is that the market
20 values each stock at the discounted present value of all expected future flows of cash to
21 the investor. The discount rate that equates those future cash flows with the market value
22 of the stock is the investor’s required rate of return.
23

24 The DCF approach is usually represented by the following formula:
25

26
$$k = \frac{d}{p} + g$$

27

28 where k = required rate of return
29 d = dividend in the immediate period
30 p = market price
31 g = expected growth rate in dividends
32

33 While the DCF method is usually presented in mathematical notation format (as above), it
34 can also be described in narrative fashion. The formula says that the return that any
35 investor expects from the purchase of a stock consists of two components. The first is the

1 immediate cash flow in the form of a dividend. The second is the prospect for future
2 growth in dividends. The sum of the rates of these two flows, present and future, equals
3 the return that investors require. Investors adjust the price they are willing to pay for the
4 stock until the sum of the dividend yield and the annual rate of expected future growth in
5 dividends equals the rate of return they expect from other investments of comparable risk.
6 The DCF test thus determines what the investing community requires from the Company
7 in terms of present and future dividends relative to the current market price.
8

9 **Q. DON'T MOST INVESTORS REGARD CAPITAL APPRECIATION AS A**
10 **PORTION OF THEIR EXPECTED RETURN?**

11
12 A. Yes. The expectation of capital appreciation is captured in the "g" or growth portion of
13 the DCF formula. If dividends grow, then it follows that the market price of the stock will
14 grow as well. It is this growth that most equity investors seek, at least in part, in
15 purchasing shares in a traded company.
16

17 **Q. HOW IS THE FIRST TERM "d/p" DEVELOPED FOR PURPOSES OF THE DCF**
18 **PROCEDURE?**

19
20 A. The "d" is the dividend in the next period, that is, the next year. There is a somewhat
21 mechanical procedure for predicting this value which applies a factor of .5 to the "g" or
22 growth factor, on the assumption that dividends will increase in lock step with earnings
23 growth. Alternatively, there are analysts' predictions of next year's dividends that
24 presumably reflect a fairly close scrutiny of the companies' cash flow requirements and
25 their stated desire (or lack thereof) to increase dividends to their stockholders. Because
26 the latter procedure takes into account company-specific considerations, I believe it is
27 more appropriate. For the "next period," I have assumed that the investment horizon at
28 this point is the year 2007 because that will be the next period by the time a decision is
29 rendered in this case. I have used Value Line's forecast of 2007 dividends.
30

1 The “p” or price denominator of the dividend yield fraction requires the exercise of some
2 judgment. Given the volatility of the stock market, it is inappropriate to use any one
3 day’s price, but it is also necessary to reflect the market’s current perception of each
4 stock’s value. For purposes of this analysis, I have used the average of prices for the
5 most recent 90 calendar days preceding June 7, 2006 as reported by Yahoo finance.

6
7 Column C of Schedules CWK-5 and CWK-6 presents the dividend yields of each of the
8 electric companies in the narrow and broad comparison groups, respectively. The
9 average dividend yield for the narrow group is 4.36 percent, and for the broad group, it is
10 4.46 percent.

11
12 **Q. IS THERE A CONVENTIONAL PROCEDURE FOR CALCULATING THE “g”**
13 **GROWTH COMPONENT OF THE DCF FORMULATION?**

14
15 A. Yes. There is a conventional procedure for calculating equity return under the DCF
16 formula that is often referred to as the “classic” DCF calculation. The Federal
17 Communications Commission (“FCC”) adopted this method in 1986 and concluded that
18 it should be given the greatest weight in determining the rate of return on equity.³ I agree
19 with this conclusion. I should note also that the Surface Transportation Board⁴ routinely
20 uses this method each year to determine the revenue adequacy of each of the nation’s
21 Class I railroads.⁵

22
23 According to the DCF theory, the relevant measure of “g” should be the growth in
24 dividends. Dividends, however, are largely a function of management discretion, and they
25 do not necessarily reflect the underlying driver of earnings. In the long run, any rate of

³ *Authorized Rates of Return for the Interstate Services of AT&T Communications and Exchange Telephone Carriers, Memorandum Opinion and Order on Reconsideration*, CC Docket No. 84-800, Phase II, 104 FCC 2d 1404, at 1407 (1986); *Resubscribing the Authorized Rate of Return for Interstate Services of Local Exchange Carriers, Order*, CC Docket No. 89-624, 5 FCC Rcd 7507, 7512 (1990); *Notice Initiating a Prescription Proceeding and Notice of Proposed Rulemaking*, CC Docket No. 98-166, October 5, 1998.

⁴ Successor agency to the Interstate Commerce Commission.

⁵ Comments of the Association of American Railroads and Its Member Railroads, Surface Transportation Board Ex Parte No. 558 (Sub-No.9), *Railroad Cost of Capital – 2005*, pp. 2-3.

1 dividend growth that differs significantly from earnings growth is likely to be
2 unsustainable. For this reason, it is generally accepted that the growth rate of earnings per
3 share ("EPS") is the most reliable indicator of the "g" factor.
4

5 The classic DCF calculation employs predictions of EPS growth, usually in the three to
6 five year time horizon. Investment analysts routinely attempt to forecast the future
7 earnings of traded companies. Value Line provides such forecasts based on the research
8 of its own and other organizations' analysts. Other sources are www.zacks.com and
9 I/B/E/S, which do not conduct independent research but survey investment analysts for
10 their predictions of future earnings growth. I have used the forecasts from these three
11 sources for my development of the electric utility industry's classic DCF return.
12

13 The long-term earnings growth forecasts for Empire and each comparison company are
14 presented in columns D, E and F of Schedules CWK-5 and CWK-6 of my exhibit.
15 Column G shows the average of these three forecasts for each company. Schedule CWK-
16 5 shows that the average forecast rate of earnings growth for the narrow comparison group
17 is 5.29 percent. Schedule CWK-6 shows that it is 5.62 percent for the broad comparison
18 group.
19

20 **Q. WHAT ARE THE EQUITY RETURN INDICATIONS FROM YOUR**
21 **APPLICATION OF THE CLASSIC DCF PROCEDURE?**
22

23 A. The final columns of Schedules CWK-5 and CWK-6 present the results of my classic
24 DCF analysis of the narrow and broad comparison groups, respectively. Schedule CWK-
25 5 reveals that when 5.29 percent average of the growth rates forecast by the three sources
26 for the narrow group is added to the 4.36 percent dividend yield, the result is an average
27 DCF return of 9.65 percent. Schedule CWK-6 shows that the average forecast growth
28 rate for the broad group is 5.62 percent and the dividend yield is 4.46 percent, for a DCF
29 indication of 10.09 percent.
30

1 Q. IS IT TO BE EXPECTED THAT THE NARROW COMPARISON GROUP
2 WOULD HAVE A LOWER REQUIRED RATE OF RETURN THAN THE
3 BROAD GROUP?
4

5 A. Yes. The broad group contains some companies that are heavily invested in merchant
6 power generation, which is intrinsically more risky than regulated utility service. For this
7 reason, this group can be expected to display a requirement for a higher rate of return
8 than the narrow group, which is composed of companies that principally provide
9 regulated monopoly utility service.
10

11 Q. WHAT IS THE CLASSIC DCF RETURN INDICATION BASED ON EMPIRE
12 SPECIFIC DATA?
13

14 A. The top line of Schedules CWK-5 and CWK-6 shows the classic DCF return calculation
15 for Empire. It is 10.57 percent.
16

17 Q. WHAT CONSIDERATION SHOULD BE GIVEN TO EMPIRE'S DCF RETURN
18 ESTIMATE?
19

20 A. Very little. First, in its order in Empire's last rate case, Case No. ER-2004-0570, the
21 Commission found that the *Hope Natural Gas* standard required that Empire's rate of
22 return be based on a comparative analysis with other companies of comparable risk. It
23 explicitly rejected analyses that were based on Empire's own DCF results.
24

25 But even if the Commission were to consider Empire's DCF results, those results are
26 somewhat less robust than the results for the other electric companies. Specifically,
27 Zacks did not have any earnings growth forecasts whatever for Empire, and the I/B/E/S
28 forecast is based on a survey of only three investment analysts.
29

1 Finally, there are factors specific to Empire that undoubtedly bias its DCF results upward.
2 I have already noted that Empire's has recently been issuing larger dividends than its
3 earnings per share. Investors cannot have failed to notice this unsustainable -- and
4 arguably unwise -- practice. Additionally, on September 21, 2005, Empire announced its
5 intention to purchase the Missouri natural gas distribution operations of Aquila, Inc.
6 Investors may believe that this venture into a new line of business increases Empire's
7 risk. Such a risk increase resulting from management's actions should not be borne by
8 ratepayers.
9

10 **Q. BUT IF EMPIRE IS PERCEIVED AS MORE RISKY THAT OTHER ELECTRIC**
11 **UTILITIES, SHOULD IT NOT RECEIVE A HIGHER RETURN?**
12

13 A. Not necessarily. The risk elements that I have noted should be short-lived. In particular,
14 Empire is the recipient of a New Regulatory Plan that is designed to ensure that it meets
15 the financial metrics that qualify it for investment grade bond ratings. Additionally, I
16 understand that the Missouri legislature has authorized a fuel adjustment clause. If
17 implemented, this will shift the risk of further fuel cost spikes from Empire shareholders
18 to ratepayers. Finally, the Aquila acquisition is also in a line of business that is generally
19 perceived as less risky than electric utility service. This observation is supported by
20 Empire Witness VanderWeide's finding that the DCF return to gas distribution
21 companies is lower than that to electric companies.
22

23 **Q. DID EMPIRE WITNESS VANDERWEIDE ALSO IMPLEMENT THE CLASSIC**
24 **DCF PROCEDURE?**
25

26 A. Yes, he did. His analysis showed a rate-of-return indication of 9.9 percent. He also
27 performed a classic analysis of 13 gas distribution companies which showed a rate-of-
28 return indication of 9.6 percent.
29

1 **Q. HOW DOES DR. VANDERWEIDE'S CLASSIC DCF ANALYSIS DIFFER FROM**
2 **YOURS?**

3

4 A. Our classic DCF analyses differs in the following respects:

- 5 • Dr. VanderWeide uses a larger group of comparison companies than I do,
- 6 • Dr. VanderWeide forecasts next year's dividend by applying the "g" factor to the
7 current year's dividend, while I use Value Line's forecast of each company's
8 2007 dividend,
- 9 • Dr. VanderWeide applies the quarterly compounding procedure to next year's
10 dividend,
- 11 • Dr. VanderWeide uses earnings forecasts only from I/B/E/S, while I also use
12 Value Line and Zacks.com.

13 With respect to each of these differences, I believe that my approach is superior.

14

15 **Q. WHY IS YOUR SELECTION OF COMPANIES SUPERIOR TO THAT OF DR.**
16 **VANDERWEIDE?**

17

18 A. As discussed earlier, Dr. VanderWeide's comparison electric group includes four
19 companies that are primarily engaged in gas distribution, one company that is principally
20 involved in non-utility, non-electric activities, and TXU, which is so heavily leveraged
21 that it cannot be considered a healthy company for comparison purposes.

22

23 **Q. WHY IS IT MORE APPROPRIATE TO USE VALUE LINE'S FORECAST OF**
24 **NEXT YEAR'S DIVIDEND THAN TO PROJECT THE "G" RATE OF**
25 **EARNINGS GROWTH TO THIS YEAR'S DIVIDEND?**

26

27 A. Dr. VanderWeide's approach of applying the "g" growth percentage to this year's
28 dividend makes the inappropriate assumption that all companies in his comparison group
29 will increase their dividend. Applied to Empire itself, for example, this assumption is
30 highly unlikely. For the past several years, Empire has been issuing dividends in excess of

1 its earnings per share. While it is altogether appropriate to assume that Empire's earnings
2 will increase in light of its historically low returns, it is clear that Empire must hold its
3 dividend at its present level until earnings rise to cover it, plus a margin for retained
4 earnings. For this reason, Value Line has quite appropriately assumed no increase in
5 Empire's dividend. Other companies may have similar cash flow constraints that prevent
6 their increasing dividends between now and 2007. Value Line recognizes these
7 conditions; Dr. VanderWeide does not.

8
9 **Q. WHY IS IT BETTER TO USE VALUE LINE AND ZACKS FORECASTS OF**
10 **EARNINGS GROWTH IN ADDITION TO I/B/E/S?**

11
12 A. Obviously, the greater the range of analyses, the more confidence one can put in the
13 average projections of earnings growth. A glance at columns D, E and F of Schedules
14 CWK-5 and CWK-6 demonstrates that there is considerable disagreement within the
15 securities analyst community as to earnings prospects of most of these companies.
16 Averaging a number of estimates ensures that these disagreements are captured in the
17 final DCF analysis.

18
19 **Q. DID YOU USE THE QUARTERLY COMPOUNDING MODEL IN COMPUTING**
20 **THE DIVIDEND YIELD, AS DR. VANDERWEIDE HAS DONE?**

21
22 A. No. The fundamental weakness of the quarterly compounding model is the assumption
23 that the dividend-issuing company must provide the earnings which an investor expects to
24 receive from the quarterly dividends up until the end of the coming year. This is flatly not
25 true. The investor receives those dividends and reinvests them -- or consumes them --
26 independently of the dividend-issuing company. He then receives whatever income those
27 dividends generate from the source of that reinvestment. It is not the responsibility of the
28 dividend-issuing company to provide these earnings. For this reason it is not necessary to
29 inflate the rate of return to account for the compounding effect of quarterly dividends.

30

1 I should note also that the FCC has twice rejected the quarterly compounding model in
2 part because the model adds complexity that is not offset by increased accuracy and in part
3 because no one has established that investors actually use quarterly compounding
4 models.⁶

5
6 **Q. WHAT IS YOUR ASSESSMENT OF THE QUALITY OF THE CLASSIC DCF**
7 **RETURN INDICATIONS?**

8
9 A. As noted earlier, I agree with the FCC and the Surface Transportation Board that the
10 “classic” formulation of the DCF model is the most reliable basis for estimating returns to
11 equity. That is because it uses market data for the dividend yield portion of the formula,
12 and it relies on the informed judgment of market analysts for its projection of future
13 growth.

14
15 As between the classic DCF results that I have calculated, the results for the narrow
16 comparison group are significantly more relevant to Empire than those for the broad
17 group. The broad group includes a number of companies that are heavily engaged in
18 merchant generation and marketing, activities that are certainly perceived by investors as
19 more risky than regulated electric utility service. I performed a DCF analysis on the
20 broad group, as adjusted to exclude companies that were completely inappropriate,
21 primarily because it would provide the Commission with a comparable calculation to Mr.
22 VanderWeider’s group.

23
24 **Q. CAN YOU SUGGEST ANY WAY TO CHECK INDEPENDENTLY ON THE**
25 **PROPRIETY OF THE NARROW GROUP DCF RESULTS?**

26
27 A. Yes. The Capital Asset Pricing Model represents a check on the DCF results.
28

⁶ Notice Initiating a Prescription Proceeding and Notice of Proposed Rulemaking, CC Docket No. 98-166, October 5, 1998, ¶ 24.

1
2 **THE CAPITAL ASSET PRICING MODEL**
3

4 **Q. PLEASE DESCRIBE THE CAPITAL ASSET PRICING MODEL?**
5

6 A. The Capital Asset Pricing Model employs a measure called "beta," which tests the
7 covariance of the stock at issue with that of the overall market, to assess the relative risk
8 of the stock against the market. As conventionally used by rate-of-return analysts, the
9 beta is assumed to measure the cost of the company's equity on a continuum between the
10 average required return of the overall equity market and a risk-free return.
11

12 The CAPM formula is as follows:

13
$$k = R_f + \beta(R_m - R_f)$$

14 Where

15 k = the prospective market cost of common equity for a specific investment

16 R_f = the "risk-free" rate of return

17 β = the company-specific beta

18 R_m = the overall stock market return on stocks for the prospective period
19

20 **Q. WHAT IS YOUR ASSESSMENT OF THE CAPM?**
21

22 A. I believe that CAPM has value in assessing the relative risk of different stocks and
23 portfolios of stocks. It can therefore be useful in checking the results of other, more
24 reliable methods of measuring equity return, such as the DCF procedure. However,
25 because of the extensive requirement for judgment in selecting each of the inputs, I
26 question its value in directly estimating a return on equity.
27

28 **Q. WHAT JUDGMENT IS REQUIRED FOR THE FIRST INPUT, β , OR BETA?**
29

30 A. As noted, beta measures the degree of covariance of the stock with that of the market
31 overall. But neither the fluctuations of the stock nor those of the market are constant, or
32 even consistent with each other over any extended period of time. As a result, there are

1 as many estimates of beta for a given company as there are analysts making the
2 measurement.

3
4 Schedule CWK-7 in my exhibit presents the betas for the narrow comparison group of
5 electric companies most similar to Empire as derived from three difference sources,
6 Thomson Financial (publishers of the I/B/E/S survey), Value Line and Zacks.com. All
7 three of these sources purport to be reliable and respected. As can be seen from the
8 exhibit, there is little or no consistency among the beta values for the respective
9 companies.

10
11 **Q. WHAT JUDGMENT IS REQUIRED IN SELECTING THE INPUT R_f , THE RISK-**
12 **FREE RATE OF RETURN?**

13
14 **A.** There is general consensus that yields to U.S. government securities are risk-free in the
15 sense that they are free from the risk of default. The difficulty is that there are quite a
16 number of U.S. government securities of differing maturities that have very different
17 yields. Most utility-sponsored rate-of-return witnesses assert that because stocks exist in
18 perpetuity, the yield of long-term government bonds is the appropriate risk-free rate. The
19 rationale is that because stocks are held in perpetuity, the corresponding risk-free rate
20 should be that of very long-term government bonds.

21
22 There are two difficulties with this rationale. The first is that stocks are not held in
23 perpetuity. To the contrary, the New York Stock Exchange has a turnover rate of about
24 100 percent annually, suggesting that the average share of stock is held only about a year.
25 The second difficulty is that long-term bonds are not free from risk. To the contrary, they
26 carry a substantial risk that inflation will erode their eventual value at maturity. Stocks
27 do not bear this inflation risk because generally the stock market rises when inflation
28 rises.

1 Q. WHAT JUDGMENT IS REQUIRED IN SELECTING THE INPUT R_m , THE
2 RETURN TO THE OVERAL MARKET?

3
4 A. The complexities and uncertainties associated with measuring the return on equity of an
5 individual company are not reduced when the object of the analysis is expanded to the
6 entire market for equities. Generally, CAPM analysts use one of two procedures. Either
7 they perform simplistic DCFs for a wide variety of stocks, in which case why not use the
8 same DCF for the stock under study? Or they use the historical return to market equities,
9 which assumes, totally unrealistically, that the investors in the equity markets during the
10 period under study actually realized the return that they were expecting. This approach
11 tells us nothing about future expectations from the market.

12
13 Q. HAS ANY COMMISSION EXPRESSED SIMILAR RESERVATIONS
14 WITH REGARD TO THE CAPM PROCEDURE?

15
16 A. Yes. When the Interstate Commerce Commission selected the DCF method in its 1981
17 Cost of Capital proceeding, it made the following comment:

18 ...CAPM requires the use of many assumptions. These include the
19 selection of a risk-free return series, the time period used in calculating the
20 risk period, the selection of the market portfolio to derive the risk
21 premium, the firms included in the industry, and the assessment of the
22 variability of railroad equity value relative to a broad group of securities.
23 Each of these can have a significant effect on the result obtained and each
24 necessitates judgments on how best to define and measure it.⁷

25
26
27 Q. HAVE YOU DEVELOPED A CAPM APPLICATION?

28
29 A. Yes. My presentation of the CAPM is presented in Schedule CWK-8 of my exhibit. As
30 shown on lines 1 through 4, I have applied a DCF approach to derive the required return
31 of the overall stock market, using Value Line's forecasts of the median dividend yield for
32 the coming year and the potential for appreciation for 1700 stocks. The dividend yield is

1 1.60 percent, and Value Line estimates that the potential for market appreciation is 50
2 percent in the coming 3 to 5 years. Using the mid-point of 4 years, this forecast translates
3 into a growth factor of 10.67 percent per year. The sum of the dividend yield of 1.60
4 percent and a growth rate of 10.67 percent yields an overall market return of 12.27
5 percent.

6
7 Although I do not necessarily agree that the 30-year Treasury bond yield is the
8 appropriate risk-free rate for purposes of the CAPM, I have accepted it in line 5. The
9 yield on these bonds as of June 16, 2006 was 5.17 percent. Based on these inputs, I
10 arrive at an overall market risk premium of 7.10 percent.

11
12 As demonstrated in Schedule CWK-8, there is a wide variety of beta measures for the
13 electric company comparison group. To minimize the effect of these variations, I have
14 used the average of the three sources of betas, Thomson, Value Line and Zacks, for the
15 narrow group of electric utilities most similar to Empire. This average is 0.66. When
16 applied to the total market risk premium of 7.10 percent, the risk premium for the electric
17 companies is 4.68 percent. When added to the risk-free rate of 5.17 percent, the indicated
18 return on equity is 9.85 percent.

19
20 Q. WHAT DOES YOUR CAPM ANALYSIS SHOW WITH REGARD TO YOUR
21 CLASSIC DCF ANALYSIS?

22
23 A. In spite of all the uncertainties and judgment involved, the CAPM analysis yields a rate
24 of return indication only 20 basis points different from my the results of my DCF analysis
25 of the 16 electric utilities most similar to Empire. I therefore believe that the CAPM
26 supports the results of my DCF analysis.

27
28
29

⁷ Ex Parte No. 415, *Railroad Cost of Capital* – 1981, 365 I.C.C. 734, AT 741.

1 **RISK PREMIUM APPROACHES**

2
3 **Q. WHAT IS THE RISK PREMIUM APPROACH?**

4
5 A. The risk premium approach operates on the assumption that investors require a greater
6 return from common stocks than from fixed return instruments such as preferred stocks
7 and bonds. This greater return is the “equity risk premium” that results from the fact that
8 common shareholders receive the residual operating income of the company after the
9 senior capital obligations have been satisfied. Since the yields on bonds and preferred
10 stocks are clearly measurable, all that is required to identify the return to stocks is to
11 estimate the risk premium over these fixed return instruments.

12
13 **Q. ARE THERE PROBLEMS WITH THE RISK PREMIUM APPROACH?**

14
15 A. Yes. The principal problem is that no one has yet come up with a truly effective way to
16 measure the equity risk premium. To identify the equity risk premium, one must identify
17 the return that investors expect when they commit their funds to equity investments.
18 Essentially, this requires that the analyst identify the conclusion of this exercise – the
19 return to equity – as an input to the analysis. As a result, the risk premium approach is
20 intrinsically a circular process: to identify the return to equity, it is necessary to know the
21 return to equity. As I will demonstrate with respect to Dr. VanderWeide’s risk premium
22 approaches, the result is a set of procedures that are fraught with conceptual, and in some
23 cases statistical problems.

24
25 **Q. WHAT MEASUREMENTS OF EQUITY RISK PREMIUMS DOES DR.
26 VANDERWEIDE EMPLOY?**

27
28 A. Dr. VanderWeide has applied two risk premium approaches, “ex ante” and “ex post.” He
29 concludes from the results, as well as his CAPM study, that his own DCF return
30 indications are understated.

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Q. PLEASE DESCRIBE DR. VANDERWEIDE’S “EX ANTE” RISK PREMIUM ANALYSIS.

A. Dr. VanderWeide’s “ex ante” approach derives a risk premium by comparing the DCF returns to a group of proxy electric companies during the period January 2003 through November 2005 with the corresponding yields on A-rated utility bonds. He finds that the difference to be 4.0 percent. He then adds this 4.0 percent to his projection of Global Insight’s forecast of A-rated utility bond yields for 2007, which is 6.9 percent, to derive an equity return of 10.9 percent.

Q. WHAT IS YOUR ASSESSMENT OF DR. VANDERWEIDE’S EX ANTE RISK PREMIUM ANALYSIS?

A. It is somewhat ironic that Dr. VanderWeide bases this analysis on a study of monthly DCF returns to electric utilities and then uses the results to denigrate his own DCF analysis. If the DCF approach is appropriate for this risk premium analysis, then it should be accepted as a valid test in its own right. Yet, notwithstanding that both tests are based on the same theory, the results of the two approaches, DCF and DCF-derived risk premium, differ by more than 100 basis points.

Specifically, Dr. VanderWeide’s Schedule JVW-3 shows that the DCF return on electric companies (he does not define which companies) was 9.66 percent in November 2005, up from 9.14 in the previous July. Somehow, these results underlie an asserted finding that the return on equity for electric companies is not 9.66 percent, but 10.9 percent, 124 basis points higher. The self-contradiction of this calculation renders it useless as a test of equity return.

Q. PLEASE DESCRIBE DR. VANDERWEIDE’S “EX POST” RISK PREMIUM ANALYSIS.

1
2 A. Dr. VanderWeide's "ex post" analysis is based on the historical difference between the
3 experienced earnings on stocks and the experienced yields on bonds over an extended
4 time period. Dr. VanderWeide conducted two such comparisons, the first being a
5 comparison of returns to S&P's 500 stocks with yields on Moody's A-rated utility bonds
6 over the period since 1937. He found the difference to be 5.27 percent. The second
7 comparison was between the experience returns to the utility stocks within S&P's list of
8 500 stocks and the yields on Moody's A-rated utility bonds during the same 67-year
9 period. This comparison yielded a difference of 4.16 percent. He then added these risk
10 premiums to the predicted 2007 return on A-rated utility bonds of 6.9 percent to yield
11 what he believes to be an equity return indication in the range of 11.1 to 12.2 percent,
12 with a mid-point of 11.7 percent.

13
14 **Q. WHAT IS YOUR ASSESSMENT OF DR. VANDERWEIDE'S EX POST RISK**
15 **PREMIUM ANALYSIS?**

16
17 A. There are serious problems with this approach from both a statistical and conceptual
18 standpoint. Statistically, one need only glance at the column titled "Stock Return" in Dr.
19 VanderWeide's Schedule JWV-5 (page 67) to recognize that the variation in the
20 observations is significantly greater than the mean. When that happens, the mean has
21 little value as a predictor for yet another observation. I have conducted an analysis of this
22 column, and I find that 70 percent of the observations lie outside of the 95 percent
23 confidence range. This means that there is a very low probability that any value will fall
24 near the mean. The mean value is thus a very poor predictor of future returns to equity,
25 and hence the future equity risk premium.

26
27 Conceptually, one must question whether realized rates of return equate to expected rates
28 of return. Obviously, investors in electric utility stocks in 2002 did not expect to receive
29 a return of negative 20.05 percent. Nor did 1998 investors expect to receive a positive
30 31.25 percent return. If they had, then probably every investor in the country would have

1 bought electric utility stocks. The implicit assumption of the realized risk premium
2 approach is that the average of these missed expectations, plus and minus, equals an
3 accurate estimate of next year's expectation. This is simply not a logical conclusion. If
4 investors consistently earn more or less than they expected, why should the average of
5 those failed expectations match their actual expectation?
6

7 Moreover, this approach assumes that risk premiums do not change over time. That is
8 undeniably not the case. When inflation is high, the risk associated with fixed income
9 investments, i.e. bonds, increases correspondingly, and the risk of variable return
10 investments declines. The risk premium of stocks over bonds declines. Conversely,
11 when inflation and interest rates are low, and the economy is prospering, the benefit of
12 stock investments relative to bonds increases, and the equity risk premium increases.
13 These risk premium fluctuations are nowhere reflected in Dr. VanderWeide's historical
14 risk premium analysis.
15

16 For the foregoing reasons, I conclude that very little credibility can be ascribed to Dr.
17 VanderWeide's ex post risk premium approach.
18

19 **EQUITY RETURN CONCLUSION**
20

21 **Q. WHAT EQUITY RETURN DO YOU RECOMMEND FOR EMPIRE?**
22

23 A. As noted earlier, I believe that the DCF procedure yields the most valuable indications of
24 the required return on equity. Of the two DCF calculations I have made, that applicable
25 to the narrow group is by far the most relevant. These are heavily regulated electric
26 utilities that have not ventured into risky merchant generation and marketing activities.
27 For this reason, I recommend the 9.65 percent narrow group DCF rate of return.
28 Because the broad group is so much riskier than Empire, I conclude that the 10.09
29 percent return on equity is too high for Empire.
30

1 As a check on my DCF results, I have applied the CAPM procedure. While this approach
2 has many defects, the 9.85 percent result supports the 9.65 percent DCF result.

3

4 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

5

6 **A. Yes. It does.**

Experience

Snively King Majoros O'Connor & Lee, Inc. Washington, DC

*President (1989 to Present)
Vice President (1970 - 1989)*

Mr. King, a founder of the firm and acknowledged authority on regulatory economics, brings over thirty years of experience in economic consulting to his direction of the firm's work in transportation, utility and telecommunications economics.

Mr. King has appeared as an expert witness on over 300 separate occasions before more than thirty state and nine U.S. and Canadian federal regulatory agencies, presenting testimony on rate base calculations, rate of return, rate design, costing methodology, depreciation market forecasting, and ratemaking principles. Mr. King has also testified before House and Senate Committees on energy and telecommunications legislation pending before the U.S. Congress.

In telecommunications, Mr. King has testified before the Federal Communications Commission on a number of policy issues, service authorization, competitive impacts, video dialtone, and prescription of interstate depreciation rates. Before state regulatory bodies, he has presented testimony in proceedings on intrastate rates, costs earnings and depreciation.

Mr. King has testified in electric, gas and water utility cases on virtually every aspect of regulation, including cost of capital, revenue requirements, depreciation, cost allocation and rate design. Mr. King is one of the nation's leading authorities on utility depreciation practices, having testified on this subject in several dozen cases before state regulatory bodies.

In addition to his appearances as a witness in judicial and administrative proceedings, Mr. King has negotiated settlements among private parties and between private parties and regulatory offices. Mr. King also has directed depreciation studies, investment cost benefit analyses, demand forecasts, cost allocation studies and antitrust damage calculations. Mr. King directed analyses of the prices of services under Federal Government's FTS2000 long distance system.

In Canada, Mr. King designed and directed an extended inquiry into the principles and procedures for regulating the telecommunication carriers subject to the jurisdiction of the Canadian Transport Commission. He also was the principal investigator in the Canadian Transport Commission's comprehensive review of rail costing procedures.

EBS Management Consultants, Inc., Washington, DC

*Director, Economic Development Department
(1968-1970)*

Mr. King organized and directed a five-person staff of economists performing research, evaluation, and planning relating to economic development of depressed areas and communities within the U.S. Most of this work was on behalf of federal, state, and municipal agencies responsible for community or regional economic development.

Principal Consultant (1966-1968)

Mr. King conducted research on a broad range of economic topics, including transportation, regional economic development, communications, and physical distribution.

W.B. Saunders & Company, Inc., Washington, DC

Staff Economist (1962-1966)

For this economic consulting firm, which later merged with EBS Management Consultants, Inc., Mr. King engaged in numerous research efforts relating primarily to economic development and transportation.

U.S. Bureau of the Budget, Office of Statistical Standards

Analytical Statistician (1961-1962)

Mr. King was responsible for the review of all federal statistical and data-gathering programs relating to transportation.

Education

Washington & Lee University, B.A. in Economics

*The George Washington University, M.A. in
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Appearances before State Regulatory Agencies

State	Electric, Gas, Water Utility Cases			Date of Cross-Examination
	Client	Case		
		Case Number	Utility	
AK	Exxon USA	P-89-1,2	Trans Alaska Pipeline System	October 18, 1990
AZ	Arizona Corporation Commission Arizona Retailers Association	U-1345-I U-1345-II	Arizona Public Service Co. Arizona Public Service Co.	December 16, 1980 January 15, 1981
CA	California Retailers Association California Retailers Association California Retailers Association California Retailers & California Manufacturers California Retailers Association	57666 57602 59351 59351 61138	Pacific Gas & Electric Co. Southern California Edison Pacific Gas & Electric Co. Southern California Edison Southern California Edison	March 6, 1978 April 25, 1978 June 12, 1981 May 20, 1982 May 28, 1982
CO	U. S. Department of Defense J.C. Penny Company U.S. Department of Defense U. S. Department of Defense U.S. Department of Defense U.S. Department of Defense U.S. Department of Defense	I&S 1100 5693 I&S 1339 I&S 1540 C. Council C. Council C. Council C. Council	Colorado Springs (Elec) All Electric Utilities Colorado Springs DPU (Gas) Colorado Springs DPU (Gas) Colorado Springs DPU (Gas) Colorado Springs DPU (Elec) Colorado Springs DPU (Elec) Colorado Springs DPU (Elec)	June 14, 1977 March 8, 1978 October 18, 1979 February 9, 1982 September 30, 1984 June 6, 1985 May 19, 1986 June 30, 1987
CT	Retailers Merchants Association Division of Consumer Counsel Public Utilities Control Auto Division of Consumer Counsel Division of Consumer Counsel Division of Consumer Counsel Division of Consumer Counsel Coalition of Hotels, Alloys & Retailers Coalition of Hotels, Alloys & Retailers	72-0204 76-0604,5 78-0303 80-0403,4 81-0413 81-0602,4 82-0701 85-10-22 87-07-01	Various Electric Utilities CL&P and HELCO Bridgeport Hydraulic Co. CL&P and HELCO United Illuminating Company CL&P and HELCO CL&P CL&P CL&P	July 22, 1976 November 10, 1977 (none) August 11, 1980 July 20, 1981 October 5, 1981 September 28, 1982 (none) April 25, 1988

CHARLES W. KING
Appearances before State Regulatory Agencies

State	Electric, Gas, Water Utility Cases			Date of Cross-Examination
	Client	Case		
		Case Number	Utility	
DC	D.C. People's Counsel	685	Potomac Electric Power Company	March 6, 1978
	D.C. People's Counsel	715	Potomac Electric Power Company	(none)
	D.C. People's Counsel	725	Potomac Electric Power Company	April 4, 1980
	D.C. People's Counsel	737	Potomac Electric Power Company	January 1, 1981
	Washington Metro Area Transit Authority	748	Potomac Electric Power Company	June 26, 1981
	Washington Metro Area Transit Authority	758	Potomac Electric Power Company	December 15, 1981
	D.C. People's Counsel	785	Potomac Electric Power Company	September 21, 1982
	Washington Metro Area Transit Authority	759	Potomac Electric Power Company	March 29, 1984
	D.C. People's Counsel	685 Remand	Potomac Electric Power Company	June 10, 1985
	D.C. People's Counsel	905	Potomac Electric Power Company	August 20, 1991
	D.C. People's Counsel	912	Potomac Electric Power Company	May 7, 1992
	D.C. People's Counsel	834, III	Potomac Electric Power Company	May 22, 1992
	D.C. People's Counsel	917	Potomac Electric Power Company	September 24, 1992
	D.C. People's Counsel	922	Washington Gas Light Company	June 15, 1993
	D.C. People's Counsel	929	Potomac Electric Power Company	December 16, 1993
	D.C. People's Counsel	934	Washington Gas Light Company	Filed April 22, 1994
	D.C. People's Counsel	939	Potomac Electric Power Company	March 16, 1995
	D.C. People's Counsel	917	Potomac Electric Power Company	April 16, 1995
	D.C. People's Counsel	951	Potomac Electric Power Company	February 20, 1997
	D.C. People's Counsel	945	Potomac Electric Power Company	September 29, 1999
D.C. People's Counsel	847	Washington Gas Light Company	June 27, 2001	
D.C. People's Counsel	989	Washington Gas Light Company	May 22, 2002	
D.C. People's Counsel	1016	Washington Gas Light Company	September 23, 2003	
DE	Delaware PSC Staff	94-164	Artesian Water Company	Filed March 10, 1995
	Delaware PSC Staff	94-149	Wilmington Suburban Water Company	March 10, 1995
	Delaware PSC Staff	04-152	Tidewater Utilities Company	Filed July 26, 2004
FL	Florida Retail Federation	790593-EU	All Electric Utilities	March 5, 1981
	Florida Retail Federation	810002-EU	Florida Power and Light Company	July 23, 1981
	Florida Retail Federation	820097-EU	Florida Power and Light Company	September 22, 1982
	Florida Retail Federation	820097-EU	Florida Power and Light Company	April 11, 1983
	Florida Retail Federation	830012-EU	Tampa Electric Company	August 19, 1983
	Florida Retail Federation	830465-EI	Florida Power and Light Company	April 19, 1984
	Florida Retail Federation	830465-EI	Tampa Electric Company	(none)

CHARLES W. KING
Appearances before State Regulatory Agencies

State	Electric, Gas, Water Utility Cases			Date of Cross-Examination
	Client	Case		
		Case Number	Utility	
GA	Georgia Retail Federation Georgia Public Service Commission Georgia Public Service Commission Georgia Public Service Commission Georgia Public Service Commission Georgia Public Service Commission Georgia Public Service Commission Georgia Public Service Commission Georgia Public Service Commission Georgia Public Service Commission Georgia Public Service Commission Georgia Public Service Commission Georgia Public Service Commission Georgia Public Service Commission	3270-U 4007-U 4384-U 4755-U 4697-U 9355-U 14000-U 14618-U 14311-U 17066-U 18300-U 18638-U 19758-U 20298-U	Georgia Power Company Georgia Power Company All Electric Utilities Georgia Power Company All Utilities Georgia Power Company Georgia Power Company Savannah Electric & Power Company Atlanta Gas Light Company Georgia Power Company Georgia Power Company Atlanta Gas Light Company Savannah Electric & Power Company Atmos Energy Corp.	September 3, 1981 August 21, 1991 August 1, 1993 January 25, 1994 May 10, 1994 November 4, 1998 October 23, 2001 March 27, 2002 April 8, 2002 July 31, 2003 October 26, 2004 March 14, 2005 March 29, 2005 October 11, 2005
HI	Public Utilities Department Hawaii Consumer Advocate	2793 4536	All Electric Utilities Hawaiian Electric Company	February 14, 1978 February 1, 1983
IL	Illinois Retail Merchants Association ("IRMA"/ Chicago Bldg. Mgrs. Association ("CBMA") IRMA/CBMA IRMA/CBMA IRMA/CBMA IRMA/CBMA IRMA/CBMA IRMA/CBMA City of O'Fallon, IL	76-0698 76-0568 80-0546 82-0026 83-0537 87-0427 90-0169 02-0690	Commonwealth Edison All Electric Utilities Commonwealth Edison Commonwealth Edison Commonwealth Edison Commonwealth Edison Commonwealth Edison Illinois-American Water Company	June 22, 1977 (none) March 5, 1981 July 22, 1982 March 19, 1984 March/April 22, 1988 October 29, 1990 Filed Feb.5, Apr.11,2003
IN	Indiana Retail Council Indiana Retail Council Indiana Retail Council	35780-S2 35780-S1 36318	N. Ind. Public Service co. Public Service of Indiana Public Service of Indiana	June 1, 1980 October 15, 1980 May 4, 1982
KS	J.C. Penny Company	115,379-U	All Kansas Utilities	January 22, 1981
KY	Seven Kentucky Retailers Attorney General of Kentucky Attorney General of Kentucky Attorney General of Kentucky	7310 2002-145 2003-252 2004-67	Louisville Gas & Electric Co. Columbia Gas of Kentucky Union Heat Light & Power Co. Delta Gas Company	April 25, 1979 Filed August 8, 2002 September 30, 2003 August 18, 2004

CHARLES W. KING
Appearances before State Regulatory Agencies

State	Electric, Gas, Water Utility Cases			Date of Cross-Examination
	Client	Case		
		Case Number	Utility	
MA	Coalition of Municipalities	20279	Western Massachusetts Electric	March 19, 1980
	Coalition of Municipalities	557/558	Western Massachusetts Electric	May 14, 1981
	Coalition of Municipalities	957	Western Massachusetts Electric	March 9, 1982
	Coalition of Municipalities	1300	Western Massachusetts Electric	January 1, 1983
	Coalition of Municipalities	85-270	Western Massachusetts Electric	March 26, 1986
MD	Maryland People's Counsel	6977	Washington Gas & Light Company	September 17, 1976
	Maryland People's Counsel	6814	Potomac Electric Power Company	
	Maryland People's Counsel	6807	All Electric Utilities	September 1, 1977
	Maryland People's Counsel	6882	Baltimore Gas & Electric Company	(none)
	Maryland People's Counsel	6985	Baltimore Gas & Electric Company	September 28, 1976
	Maryland People's Counsel	7070	Baltimore Gas & Electric Company	December 20, 1976
	Maryland People's Counsel	7149	Potomac Electric Power Company	April 18, 1978
	Maryland People's Counsel	7163	All Electric Utilities	January 17, 1979
	Maryland People's Counsel	7236	Delmarva Power & Light Company	October 23, 1978
	Retail Merchants of Baltimore	7397	Baltimore Gas & Electric Company	June 20, 1980
	Maryland People's Counsel	7427	Delmarva Power & Light Company	September 8, 1980
	Maryland People's Counsel	7574	Baltimore Gas & Electric Company	December 2, 1981
	Maryland People's Counsel	7597	Potomac Electric Power Company	February 18, 1982
	Organization of Consumer Justice	7604	Potomac Electric Power Company	April 20, 1982
	Maryland People's Counsel	7588	Baltimore Gas & Electric Company	October 19, 1982
	Maryland People's Counsel	7663	Potomac Electric Power Company	November 22, 1982
	Retail Merchants of Baltimore	7685	Baltimore Gas & Electric Company	April 12, 1983
	Genstar Stone Products, et al.	7878	Potomac Electric Power Company	December 9, 1985
	Industrial Intervenors	7878	Potomac Electric Power Company	June 28/July 1986
	Maryland People's Counsel	7983	Baltimore Gas & Electric Company	March 4, 1987
Giant Foods, Inc.	8855	Baltimore Gas & Electric Company	January 8, 2003	
Maryland People's Counsel	9036	Baltimore Gas & Electric Company	September 29, 2005	
MI	General Services Administration	U-10102	Detroit Edison Company	March 22, 1993
	Michigan Attorney General	U-11722	Detroit Edison Company	November 6, 1998
	Michigan Attorney General	U-11772	Consumers Energy/Detroit Edison	November 16, 1998
	Michigan Attorney General	U-11495	Detroit Edison Company	December 8, 1999
	Michigan Attorney General	U-11956	Consumer Energy/Detroit Edison	December 15, 1999
	Michigan Attorney General	U-12505	Consumers Energy Company	September 7, 2000
	Michigan Attorney General	U-12478	Detroit Edison Company	October 5, 2000
	Michigan Attorney General	U-12639	Consumers Energy/Detroit Edison	July 18, 2001
	Michigan Attorney General	U-13000	Consumers Energy Company	January 29, 2002
	Michigan Attorney General	U-13380	Consumers Energy Company	September 9, 2002
	Michigan Attorney General	U-13715	Consumers Energy Company	April 24, 2003
	Michigan Attorney General	U-13808	Detroit Edison Company	Dec 12, 2003; Jan 30, Mar 5, 04

CHARLES W. KING
Appearances before State Regulatory Agencies

State	Electric, Gas, Water Utility Cases			Date of Cross-Examination
	Client	Case		
		Case Number	Utility	
M1 (Cont'd)	Michigan Attorney General Michigan Attorney General Michigan Attorney General Michigan Attorney General Michigan Attorney General Michigan Attorney General Michigan Attorney General Michigan Attorney General Michigan Attorney General Michigan Attorney General Michigan Attorney General Michigan Attorney General	U-12999 U-13898,9 U-14201 U-14274 U-14148 U-14399 U-14428 U-14292 U-13808-R U-14547 U-14701 U-14526 U-14561	Consumers Energy Company Michigan Consolidated Gas Co. Detroit Edison Company Consumers Energy Company Consumers Energy Company Detroit Edison Company Detroit Edison Company All Michigan Utilities Detroit Edison Company Consumers Energy Company Consumers Energy Company Consumers Energy Company All Gas Distribution Utilities	March 10, 2004 August 23, 2004 Filed December 5, 2004' Filed February 15, 2005 Filed March 2, 25, 2005 July 29, 2005 September 7, 2005 September 27, 2005 November 7, 2005 Nov. 7, 2005; Mar. 22, 2006 March 21, 2006 April 11, 2006 June 1, 2006
MN	Minnesota Retail Federation	EO02/6R-77-611	Northern States Power	1979
MO	Missouri Retailers Association	EO-78-161	Kansas City Power & Light Company	February 19, 1981
NC	North Carolina Merchants Association	E-100	All Electric Utilities	December 18, 1975
ND	North Dakota Public Service Commission North Dakota Public Service Commission North Dakota Public Service Commission North Dakota Public Service Commission North Dakota Public Service Commission	PU-400-00-521 PU-399-01-786 PU-399-02-183 PU-399-02-183 PU-399-03-296 PU-04-97	Xcel Energy, Inc. Montana-Dakota Utilities (Electric) Montana-Dakota Utilities (Gas) Montana-Dakota Utilities (Gas Depr.) Montana-Dakota Utilities (Electric) Montana-Dakota Utilities (Gas)	April 20, 2001 February 25, 2002 October 7, 2002 Filed April 7, 2003 Filed October 15, 2003 Filed July 6, 2004
NH	Business & Industry Association of N.H. Business & Industry Association of N.H. Business & Industry Association of N.H.	79-187-II 80-260 82-333	Public Service of N.H. Public Service of N.H. Public Service of N.H.	February 6, 1981 February 5, 1981 November 2, 1983
NJ	N.J. Retail Merchants Association Department of Public Advocate Resorts International Hotel, Inc. Dept. of Public Advocate Dept. of Public Advocate Dover Township Fire Chiefs	803-151 815-459 8011-827 822-116 355-87 88-080967	All New Jersey Utilities N.J. Natural Gas Company Atlantic City Sewerage Co. Atlantic City Electric Co. Elizabethtown Gas Tom's River Water Company	March 31, 1981 (none) (none) August 11, 1982 June 9, 1987 February 22, 1989

CHARLES W. KING
Appearances before State Regulatory Agencies

State	Electric, Gas, Water Utility Cases			Date of Cross-Examination
	Client	Case		
		Case Number	Utility	
NY	N.Y. Council of Retail Merchants Metropolitan N.Y. Retail Council Metropolitan N.Y. Retail Council N.Y. Metro. Transit Authority	26806 27029 27136 27353	All Electric Utilities Consolidated Edison Company Long Island Lighting Company Consolidated Edison Company	February 3, 1976 (none) July 1, 1977 September 5, 1980
OH	Ohio Council of Retail Association Ohio Council of Retail Association	88-170-EL 83-1529-EL	Cleveland Elec. Illuminating Cincinnati Gas & Electric	(none) February 15, 1992
PA	Pennsylvania Retail Association Southeastern Pa. Transp. Authority Eastern Penn Energy Users Group Eastern Penn Energy Association Penn Business Utility User Group Pennsylvania Office of Consumer Advocate	76-PRMD-7 R-811626 R-822169 R-842651 R-850152 R-00016339	All Electric Utilities Philadelphia Electric Company Penn. Power & Light Company Penn. Power & Light Company Philadelphia Electric Company Pennsylvania-American Water Co.	September 7, 1977 December 11, 1981 March/April 1983 December 3, 1984 February 19, 1986 September 19, 2001
TX	Houston Retailers Association Houston Retailers Association Cities for Fair Utility Rates	5779 6765 8425/8431	Houston Lighting Company Houston Lighting Company Houston Lighting Company	October 19, 1984 September 25, 1986 April 25, 1989
UT	Div. Of Public Utilities Dept of Commerce Div. Of Public Utilities Dept of Commerce	98-2035-33 05-057-T01	Pacific Corp Questar Gas Company	Filed August 16, Sept 22, 1999 May 17, 2006
VA	Consumer Congress of Virginia Consumer Congress of Virginia Va. Business Committee on Energy Virginia Pipe Trades Council	19426 19960 PUE 7900012 PUE 8900051	Virginia Electric Power Company Virginia Electric Power Company Virginia Electric Power Company Old Dominion Electric Corp. &	July 1, 1975 September 19, 1978 February 25, 1981 October 31, 1989
WI	Wisconsin Merchants Federation	6630-ER-2	Wisconsin Electric Power Company	May 15, 1978

CHARLES W. KING
Appearances before State Regulatory Agencies

State	Telecommunications Cases			Date of Cross-Examination
	Client	Case		
		Case Number	Utility	
AL	U.S. Department of Defense	24472	All Telephone Companies	June 14, 1995
AK	GCI Communications, Inc. GCI Communications, Inc.	U-97-82,U-97-143 U-05-46	Alaska Communications Systems Matanuska Telephone Association	Filed Feb 25, April 5, 2004 October 28, 2005
AZ	Arizona Burglar & Fire Alarm Association	9981-E- 1051-80-64	Mountain State Telephone	(none)
	Federal Executive Agencies U.S. Department of Defense	E-1051-88-146 T-01051B-99-0105	Mountain State Telephone US WEST Communications	(none) Filed July 26, Sept 8, 2000
CA	Western Burglar & Fire Alarm Association	59849	Pacific Telephone & Telegraph	March 25, 1981
	Western Burglar & Fire Alarm Association	5984cont.	Pacific Telephone & Telegraph	June 23, 1982
	Western Burglar & Fire Alarm Association	A83-01-22	Pacific Telephone & Telegraph	June 29, 1983
	Western Burglar & Fire Alarm Association	A83-02-02	General Telephone of California	January 17, 1984
	Western Burglar & Fire Alarm Association	A82-11-07	Pacific Telephone & Telegraph	Jan. 18, Oct. 31, Nov 28, 1984
	Western Burglar & Fire Alarm Association	A85-01-034	Pacific Telephone & Telegraph	June 4, 1985, October 2, 1986
	Western Burglar & Fire Alarm Association	A87-01-02	General Telephone of California	October 22, 1987
	Western Burglar & Fire Alarm Association	A88-07-17019	Pac. Bell Tel. & GTE of CA.	January 23, 1989
	California Cellular Resellers	A.88-11-1040	All Cellular Carriers	August 11, 1989
	Federal Executive Agencies	1.87-11-033	All Telephone Companies	March 6-7, 1991
	California Cellular Resellers	1.88-11-040	All Cellular Carriers	August 19, 1991
	Cellular Services, Inc. Federal Executive Agencies	1.88-11-040 A92-05-004	All Cellular Carriers Pacific Telephone & Telegraph	October 3, 1991 June 9, 1993
CO	U.S. Department of Defense	I&S 717	Mountain Bell Telephone Company	1972
	U.S. Department of Defense	I&S 1700	Mountain Bell Telephone Company	(none)
	U.S. Department of Defense	Appl.	Mountain Bell Telephone Company	September 18, 1986
	U.S. Department of Defense	I&S 1766	Mountain Bell Telephone Company	November 28, 1988
	Colorado Municipal League	Appl 36883	Mountain Bell Telephone Company	December 13, 1988
	U.S. Department of Defense	I&S 891-082T	U.S. West Communications	February 21, 1990
	U.S. Department of Defense	905-544T	U.S. West Communications	July 17, 1991
	U.S. Department of Defense	90A-665T	U.S. West Communications	October 23, 1991
	U.S. Department of Defense	92M-039T	U.S. West Communications	February 24-24, 1992
	U.S. Department of Defense	92S-229T	U.S. West Communications	July 30-31, 1992
	U.S. Department of Defense	90A-665T	U.S. West Communications	November 6, 1996
	AT&T	96S-331T	U.S. West Communications	April 17, 1997

CHARLES W. KING
Appearances before State Regulatory Agencies

State	Telecommunications Cases			Date of Cross-Examination
	Client	Case		
		Case Number	Utility	
CT	Connecticut Consumer Counsel CT Cellular Resellers Assn. CT Cellular Resellers Coalition AT&T Connecticut Consumer Counsel Connecticut Consumer Counsel	770526 89-12-05 94-03-27 AT&T/SNET Arbitration 96-04-07 00-07-17	Southern New England Telephone Co. Southern New England Telephone Co. Springwich Cellular/Bell Atlantic Southern New England Telephone Co. Southern New England Telephone Co. Southern New England Telephone Co.	November 10, 1977 (none) May 16, June, 1994 Filed October 28, 1996 February 10, 1998 December 5, 2000
DC	D.C. People's Counsel D.C. People's Counsel General Services Administration General Services Administration General Services Administration General Services Administration	729 798 827 854 850 926	Chesapeake & Potomac Tel. Co. Chesapeake & Potomac Tel. Co. Chesapeake & Potomac Tel. Co. Chesapeake & Potomac Tel. Co. Chesapeake & Potomac Tel. Co. Chesapeake & Potomac Tel. Co.	May 13, 1980 July 18, 1983 May 7, 1985 April 16, 1987 October 7, 1991 October 7, 1993
DE	Public Service Commission Federal Executive Agencies Public Service Commission	Depr.Repre 86-20 Depr.Repre	Diamond State Telephone Co. Diamond State Telephone Co. Diamond State Telephone Co.	April 1, 1985 July 31, 1987 March 8, 1988
FL	GTE Sprint Communications Company Office of Public Counsel Federal Executive Agencies Federal Executive Agencies Federal Executive Agencies	720536-TP Depr.Repre 880069-TL 880069-TL 880069-TL	All Telephone Companies Southern Bell Southern Bell Southern Bell Southern Bell	September 12, 1983 July 30, 1986 July 21, 1988 November 30, 1990 February 11, 1992
GA	Georgia Attorney General Federal Executive Agencies Federal Executive Agencies Georgia Public Service Commission	3893-U 3905-U 3987-U 4018-U	Southern Bell Telephone Co. Southern Bell Telephone Co. Southern Bell Telephone Co. Southern Bell Telephone Co.	January 8, 1990 June 12, 1990 February 13, 1992 Jan 14, Feb 10, 1993
HI	Hawaii Public Utility Commission Four Hawaii Counties Department of Defense Department of Defense Department of Defense Department of Defense Department of Defense	1871 4588 7579 94-0093 7702 94-0298 7720	Hawaiian Telephone Company Hawaiian Telephone Company Hawaiian Telephone Company Oceanic Communications All Communications Carriers GTE Hawaiian Telephone Company Verizon-Hawaii	July 8, 1971 December 15, 1983 April 26, 1994 March 13, 1995 June 2, 1995 May 7, 1996 November 15, 2000

CHARLES W. KING
Appearances before State Regulatory Agencies

State	Telecommunications Cases			Date of Cross-Examination
	Client	Case		
		Case Number	Utility	
ID	U.S. Department of Energy U.S. Department of Energy	U-1000-63 U-1000-70	Mountain Bell Telephone Co. Mountain Bell Telephone Co.	May 16, 1983 March 6, 1984
IL	Illinois Alarm Companies Attorney General of Illinois GTE Sprint Communications Co. Federal Executive Agencies	79-0143 81-0478 83-0142 89-0033	Illinois Bell Telephone Illinois Bell Telephone All Telephone Companies Illinois Bell Telephone	September 26, 1979 December 28, 1981 August 4, 1983 June 12, 1989
KS	State Corporation Commission Federal Executive Agencies Federal Executive Agencies	Depr. Repr. 166.856-U 190, 492	Southwestern Bell Southwestern Bell All Telephone Companies	May 12-14, 1986 November 7, 1989 November 4, 1994
KY	Kentucky Cable Telecommunications Assn. Kentucky Cable Telecommunications Assn.	2000-414 2000-39	Blue Grass Energy Cooperative Cumberland Valley Electric, Inc.	January 11, 2001 January 11, 2001
MD	Maryland People's Counsel Maryland People's Counsel Maryland People's Counsel Maryland People's Counsel Federal Executive Agencies Federal Executive Agencies Federal Executive Agencies	6813 6881 7025 7467 7851 8106 8274	C&P Telephone Company C&P Telephone Company C&P Telephone Company C&P Telephone Company C&P Telephone Company C&P Telephone Company C&P Telephone Company	1975 December 17, 1975 March 15, 1975 October 20, 1981 March 20, 1985 May 9, 1988 August 2, 1990
MI	Michigan Attorney General Michigan Attorney General	U-8911 U-9553	Michigan Bell Telephone Co. AT&T Communications/MCI	November 7, 1988 December 4, 1990
MN	GTE Sprint Communications Co. U.S. Department of Defense	83-102-HC 87-021-BC	All Telephone Companies Northwest Bell Telephone Co.	August 5, 1983 (none)

CHARLES W. KING
Appearances before State Regulatory Agencies

State	Telecommunications Cases			Date of Cross-Examination
	Client	Case		
		Case Number	Utility	
MO	GTE Sprint Communications Co. Federal Executive Agencies Federal Executive Agencies	TR83-253 TC-89-14 TO-89-56	Southwestern Bell Tel. Co. Southwestern Bell Tel. Co. Southwestern Bell Tel. Co.	September 5, 1983 (none) November 7, 1990
MS	Federal Executive Agencies	U-5453	South Central Bell Tel. Co.	May 15, 1990
NJ	Department of Public Advocate Department of Public Advocate Department of Public Advocate Department of Public Advocate Department of Public Advocate	Depr.Repr. 815-458 Depr.Repr. Depr.Repr. T092030358 TMO05080739	N.J. Bell Telephone Company N.J. Bell Telephone Company N.J. Bell Telephone Company N.J. Bell Telephone Company N.J. Bell Telephone Company United Telephone Co. of New Jersey	Mar-79 October 15, 1981 March 1, 1982 February 1, 1985 September 30, 1992 January 5, 2006
NM	New Mexico Corporation Commission New Mexico Corporation Commission	1032 86-151-TC	Mountain Bell Telephone Co. General Telephone of Southwest	November 14, 1983 February 5, 1987
NV	Prime Cable of Las Vegas Prime Cable of Las Vegas	95-8034/8035 96-9035	Central Telephone - NV Sprint/Centel, Nevada Bell	Filed November 22, 1995 June 2, 1997
NY	Holmes Protection, Inc. Holmes Protection, Inc. 5 Alarm Companies GTE Sprint Communications Co.	27350 27469 27710 28425	New York Telephone Company New York Telephone Company New York Telephone Company All Telephone Companies	October 17, 1978 May 17, 1979 July 24, 1980 July 8, 1983
PA	City of Philadelphia	R-832316	Pennsylvania Bell Telephone	September 20, 1983
SC	Office of Consumer Advocate Office of Consumer Advocate Office of Consumer Advocate Office of Consumer Advocate Office of Consumer Advocate	Depr.Repr. 86-511-C 86-541-C Depr.Repr. 89-180-C	Southern Bell Southern Bell General Telephone of South Southern Bell ALLTEL of South Carolina	July 1, 1986 December 11, 1986 April 8, 1987 July 10, 1989 September 26, 1989

CHARLES W. KING
Appearances before State Regulatory Agencies

State	Telecommunications Cases			Date of Cross-Examination
	Client	Case		
		Case Number	Utility	
TX	U.S. Department of Defense	8585/8218	Southwestern Bell Telephone Co.	(none)
VA	U.S. Dept. Of Defense, GSA, et Federal Executive Agencies	19696 PUC 890014	C&P Telephone Company All Telephone Companies	October 6, 1976 February 13, 1989
VI	V.I. Department of Commerce V.I. Public Service Commission	205 341	Virgin Islands Telephone Co. Virgin Islands Telephone Co.	April 29, 1980 March 20, 1991
WA	U.S. Department of Defense U.S. Department of Defense U.S. Department of Defense U.S. Department of Defense WA Attorney General/TRACER U.S. Department of Defense U.S. Department of Defense WA Attorney General/TRACER WA Attorney General/TRACER U.S. Department of Defense WA Attorney General/WeBTEC/AARP WA Attorney General WA Attorney General	U-72-39 U-87-796-T U-88-20524 U-89-2698-F UT-940641 UT-941464 UT-951425 UT-961632 UT-021120 UT-040788 UT-040520 UT-050814	Pacific Northwest Bell Pacific Northwest Bell Pacific Northwest Bell US West Communications US West Communications US West Communications US West Communications US West Communications GTE Northwest, Inc Qwest Communications Verizon Northwest, Inc. Verizon Northwest, Inc. Verizon - MCI Merger	1973 December 20, 1983 November 8, 1988 November 28, 1989 Filed October 14, 1994 June 22, 1995 January 22, 1996 Filed June 23, 1997 July 29, 1997 May 22, 2003 August 12, 2004 February 2, 2005 November 2, 2005
WI	GTE Sprint Wisconsin Consumers Utility Board Wisconsin Consumers Utility Board	6720-TR-38 2055-TR-102 5846-TR-102	All Telephone Companies CenturyTel of Central Wisconsin Telephone USA, LCC	October 20, 1983 June 26, 2002 June 26, 2002

CHARLES W. KING
Appearances before Federal Regulatory Agencies

Federal Communications Commission			
Client	Docket	Subject	Date of Cross-Examination
Department of Defense	16020	Consat Rate of Return	1973
Airline Parties	16258	Bell System Rates	July 22, 1968
Airline Parties	18128	TELPAC	3/22, 10/15 1971, Feb. 22, 1972
National Data Corporation	19989	WATS	(none)
Press Wire Services	19919	Private Line Rates	(none)
Aeronautical Radio	20814	Private Line Rates	October 5, 1978
Department of Defense	20690	1,544 Mbps Service	January 30, 1979
State of Hawaii	21263	Interstate Separation	February 7, 1979
International Record Carriers	CC78-97	Telex/TWX Rates	March 6, 1980
ITT World Communications	CC84-633	Rate of Return	(none)
Aeronautical Radio	CC78-72	Access Line Charges	(none)
MCI	CC84-800	Rate of Return	(none)
Ind. Data Com. Mfg. Assn.	CC85-26	AT&T Accounting Plan	(none)
Tymnet, Inc.	ENF84-22	Packet Switching Costs	(none)
Adelphia Jones Intercable, et. al.	Bell Atlantic	Video Dialtone	Filed 7/29/94
Adelphia Jones Intercable, et. al.	Bell Atlantic	Video Dialtone	Filed 8/23/94
Adelphia Jones Intercable, et. al.	Bell Atlantic	Video Dialtone	Filed 2/21/95
Nuclear Regulatory Commission			
Fauquier League for Environment Protection	50-328 50-329	Va. Electric Power Co.	1976
Postal Rate Commission			
Association of Third Class Mail Users	R71-1	Rates	1970
Dow Jones & Company	R72-1	Rates	1972
Dow Jones & Company	R74-1	Rates	September 13, 1974
Dow Jones & Company	MC76-2	Rate Structure	January 6, 1979
Dow Jones & Company	MC79-3	Rate Structure	September 12, 1979
Dow Jones & Company	R80-1	Rates	November 25, 1980
Warshawsky & Company	C82-1	Rate Structure	(none)
Dow Jones & Company	R84-1	Postal Costs	June 14, 1984
Dow Jones & Company	R87-1	Rate Structure Costs	November 2, 1987
Dow Jones & Company	R90-1	Rate Structure Costs	Sept 12, Oct 10, 1990
Dow Jones & Company	MC91-1	Pre-barcoding Discounts	November 19, 1991
Dow Jones & Company	MC91-3	Palletization Discounts	March 2, 1992

CHARLES W. KING
Appearances before Federal Regulatory Agencies

Client	Docket	Subject	Date of Cross-Examination
U.S. Congress			
National Retail Merchants Association National Wireless Resellers Association	House/Senate Hearings House Commerce Committee	Electric Rate Reform Legislation Interconnection & Resale of Wireless Services	1976, 1977 & 1979 October 12, 1995
Federal Maritime Commission			
State of Hawaii Foss Alaska Line Palmetto Shipping and Stevedoring	71-18 79-54 85-20	Ocean Shipping Rates Barge Rate Increase Vessel Charge Liability	October-71 July 1979 October 27, 1986
Interstate Commerce Commission			
Western Coal Traffic League Western Coal Traffic League Western Coal Traffic League Arkansas Power & Light Co. Central Illinois Light Co. Western Coal Traffic League	Ex Parte 349 Ex Parte 357 Ex Parte 375 (Sub1) 37276 37450 Ex Parte 347	R.R. Rate Increase R.R. Rate Increase R.R. Rate Increase Cost of Capital Cost of Capital Costing Methods	May-76 Oct-78 June 1, 1980 (none) March 10, 1981 (none)
Civil Aeronautics Board			
Thomas Cook, Inc.	36595	Air Fare Deregulation	(none)
Copyright Royalty Tribunal			
Public Broadcasting Service	88-2-86CD	Television Valuation	(none)
Federal Energy Regulatory Commission			
Exxon USA	OR89-2-000	Pipeline Quality Bank	October 18, 1990
Canadian Transport Commission			
Rail Costing Inquiry, 1967-1969 Telecommunications Costing Inquiry, 1972-1975			
Surface Transportation Board			
Williams Energy Services, Inc	Ex Parte 582, Sub 1	Rail Merger Guidelines	April 5, 2001

**Empire District Electric Company
 Cost of Capital**

A	B	C	D	E
Capital Structure March 31, 2006:				
	Amount Outstanding 000s	Percent of Total	Cost Rate	Weighted Return
1 Long-term Debt	\$ 410,112	49.59%	7.04%	3.49%
3 Common Equity	384,040	46.44%	9.65%	4.48%
4 Short-term Debt (1)	32,857	3.97%	5.59%	0.22%
5 Total	\$ 827,009	100.00%		8.19%

(1) Short-term Debt	46,000
CWIP, March 31, 2006	<u>(13,143)</u>
Net Short-term Debt	32,857

Sources:

Capital Structure: Empire's March 31 Form 10Q, page 7
 CWIP: Account 107 Report
 Long-term Debt Cost: Empire's Schedule H.1
 Short-term Debt Cost: Response to P.C. Data Request 4013
 Equity Cost: Testimony

**VanderWeide Electric Utility Comparison Group
2005 Revenues by Source**

			2005 Revenues (\$millions)				2005 Revenues Percent				Excluded from	
			Regulated		Non-Regulated	Total	Regulated		Non-Regulated	Total	Broad List	Narrow List
			Electric	Gas			Electric	Gas				
1	Empire District Electric	EDE	360.4		26.5	386.9	93.2%	0.0%	6.8%	100.0%		
2	Aliant Energy	LNT	2,320.6	685.1	188.0	3,193.7	72.7%	21.5%	5.9%	100.0%		
3	American Electric Power	AEP	11,193.0	463.0	455.0	12,111.0	92.4%	3.8%	3.8%	100.0%		
4	Ameren Corp	AEE	5,431.0	1,345.0	4.0	6,780.0	80.1%	19.8%	0.1%	100.0%		
5	Consolidated Edison	ED	7,588.0	1,858.0	2,244.0	11,690.0	64.9%	15.9%	19.2%	100.0%		
6	Dominion Resources	D	5,543.0	1,763.0	10,768.0	18,074.0	30.7%	9.8%	59.6%	100.0%		x
7	DTE Energy	DTE	4,462.0	2,138.0	1,356.0	7,956.0	56.1%	26.9%	17.0%	100.0%		x
8	Edison International	EIX	9,500.0		2,352.0	11,852.0	80.2%	0.0%	19.8%	100.0%		
9	Energy East Corp.	EAS	2,969.6	1,783.6	545.4	5,298.6	56.0%	33.7%	10.3%	100.0%		x
10	Entergy Corp	ETR	8,446.8	77.7	1,581.8	10,106.3	83.6%	0.8%	15.7%	100.0%		
11	FirstEnergy Corp	FE	4,915.0		838.0	5,753.0	85.4%	0.0%	14.6%	100.0%		
12	Great Plains Energy	GXP	1,130.8		1,474.1	2,604.9	43.4%	0.0%	56.6%	100.0%		x
13	Hawaiian Electric	HE	1,806.4		409.2	2,215.6	81.5%	0.0%	18.5%	100.0%		
14	IDACORP Inc.	IDA	837.7		21.8	859.5	97.5%	0.0%	2.5%	100.0%		
15	MDU Resources	MDU	181.2	772.1	2,502.1	3,455.4	5.2%	22.3%	72.4%	100.0%	non-utility	x
16	NiSource Inc.	NI	1,248.6	5,600.4	1,050.1	7,899.1	15.8%	70.9%	13.3%	100.0%	gas co.	x
17	Northeast Utilities	NU	4,836.5	670.8	1,890.1	7,397.4	65.4%	9.1%	25.6%	100.0%		x
18	NSTAR	NST	2,543.5	571.2	128.4	3,243.1	78.4%	17.6%	4.0%	100.0%		x
19	OGE Energy	OGE	1,720.7	4,227.5		5,948.2	28.9%	71.1%	0.0%	100.0%	gas co.	x
20	Otter Tail Corp.	OTTR	313.0		733.4	1,046.4	29.9%	0.0%	70.1%	100.0%		x
21	PEPCO Holdings	POM	4,702.9		3,362.5	8,065.4	58.3%	0.0%	41.7%	100.0%		x
22	Pinnacle West Capital	PNW	2,237.1		750.9	2,988.0	74.9%	0.0%	25.1%	100.0%		
23	PHM Resources	PNM	1,564.1	510.8	1.9	2,076.8	75.3%	24.6%	0.1%	100.0%		
24	PPL Corp.	PPL	4,329.0		1,890.0	6,219.0	69.6%	0.0%	30.4%	100.0%		x
25	Progress Energy	PGN	7,710.0		235.0	7,945.0	97.0%	0.0%	3.0%	100.0%		
26	Puget Energy Inc.	PSD	1,612.9	952.5	7.8	2,573.2	62.7%	37.0%	0.3%	100.0%		
27	SCANA Corp.	SCG	1,908.3	1,826.6	1,609.4	5,344.3	35.7%	34.2%	30.1%	100.0%		x
28	Sempra Energy	SRE	1,789.0	4,743.0		6,532.0	27.4%	72.6%	0.0%	100.0%	gas co.	x
29	Southern Co.	SO	4,461.8		186.0	4,647.8	96.0%	0.0%	4.0%	100.0%		
30	TXU Corp	TXU	10,437.0		354.0	10,791.0	96.7%	0.0%	3.3%	100.0%	too leveraged	x
31	Vectren Corp	AVU	421.4	1,359.7	1.0	1,782.1	23.6%	76.3%	0.1%	100.0%	gas co.	x
32	Wisconsin Energy	WEC	3,793.0		40.0	3,833.0	99.0%	0.0%	1.0%	100.0%		
33	Xcel Energy Inc.	XEL	7,246.6	2,307.4	74.5	9,628.5	75.3%	24.0%	0.8%	100.0%		

Source: Companies' SEC Forms 10K, 2005

**Electric Utility Comparison Companies - Broad Group
Capital Structures**

			LT Debt	ST Debt	Prf Stock	Common Equity	Total	Equity % of Capital	
								Total	Permanent
1	Empire District Electric	EDE	410.1	32.9		384.0	827.0	46.4%	48.4%
2	Aliant Energy	LNT	2,066.5	302.1	243.8	2,440.5	5,052.9	48.3%	51.4%
3	American Electric Power	AEP	12,226.0	10.0	61.0	9,088.0	21,385.0	42.5%	42.5%
4	Ameren Corp	AEE	5,450.0	193.0	195.0	6,364.0	12,202.0	52.2%	53.0%
5	Consolidated Edison	ED	7,420.0	755.0	213.0	7,310.0	15,698.0	46.6%	48.9%
6	Dominion Resources	D	16,983.0	1,618.0	257.0	10,397.0	29,255.0	35.5%	37.6%
7	DTE Energy	DTE	8,169.0	691.0		5,769.0	14,629.0	39.4%	41.4%
8	Edison International	EIX	9,578.0		719.0	6,615.0	16,912.0	39.1%	39.1%
9	Energy East Corp.	EAS	3,993.6	121.3	24.6	2,872.7	7,012.2	41.0%	41.7%
10	Entergy Corp	ETR	8,928.0	40.0		7,742.7	16,710.7	46.3%	46.4%
11	FirstEnergy Corp	FE	10,198.0	731.0	184.0	9,188.0	20,301.0	45.3%	46.9%
12	Great Plains Energy	GXP	1,142.6	37.9	39.0	1,223.4	2,442.9	50.1%	50.9%
13	Hawaiian Electci	HE	1,143.0	141.8		1,216.6	2,501.4	48.6%	51.6%
14	IDACORP Inc.	IDA	1,039.9	60.1		1,025.3	2,125.3	48.2%	49.6%
15	Northeast Utilities	NU	3,050.0	32.0	116.2	2,429.3	5,627.5	43.2%	43.4%
16	NSTAR	NST	1,642.9	417.5	43.0	1,535.0	3,638.4	42.2%	47.7%
17	Otter Tail Corp.	OTTR	261.6	16.0	16.8	464.4	758.8	61.2%	62.5%
18	PEPCO Holdings	POM	4,672.4	156.4	45.9	3,584.1	8,458.8	42.4%	43.2%
19	Pinnacle West Captial	PNW	2,993.5	15.7		3,425.0	6,434.2	53.2%	53.4%
20	PHM Resources	PNM	1,746.4	332.2		1,286.5	3,365.1	38.2%	42.4%
21	PPL Corp.	PPL	7,081.0	214.0	107.0	4,418.0	11,820.0	37.4%	38.1%
22	Progress Energy	PGN	10,959.0	175.0	136.0	8,038.0	19,308.0	41.6%	42.0%
23	Puget Energy Inc.	PSD	2,264.0	41.0	1.9	2,027.0	4,333.9	46.8%	47.2%
24	SCANA Corp.	SCG	3,136.0	427.0	8.0	2,677.0	6,248.0	42.8%	46.0%
25	Southern Co.	SO	11,859.0	1,258.0	596.0	10,689.0	24,402.0	43.8%	46.2%
26	Wisconsin Energy	WEC	3,527.0	456.3	30.4	2,680.1	6,693.8	40.0%	43.0%
27	Xcel Energy Inc.	XEL	6,733.3	746.1	105.0	5,395.3	12,979.7	41.6%	44.1%
28	Average							44.5%	46.2%

**Electric Utility Comparison Companies - Narrow Group
Capital Structures**

			Equity % of Capital						
			LT Debt	ST Debt	Prf Stock	Common Equity	Total	Total	Permanent
1	Empire District Electric	EDE	410.1	32.9		384.0	827	46.43%	48.36%
2	Aliant Energy	LNT	2,066.5	302.1	243.8	2,440.5	5,052.9	48.30%	51.37%
3	American Electric Power	AEP	12,226.0	10.0	61.0	9,088.0	21,385.0	42.50%	42.52%
4	Ameren Corp	AEE	5,450.0	193.0	195.0	6,364.0	12,202.0	52.16%	52.99%
5	Consolidated Edison	ED	7,420.0	755.0	213.0	7,310.0	15,698.0	46.57%	48.92%
6	Edison International	EIX	9,578.0		719.0	6,615.0	16,912.0	39.11%	39.11%
7	Entergy Corp	ETR	8,928.0	40.0		7,742.7	16,710.7	46.33%	46.44%
8	FirstEnergy Corp	FE	10,198.0	731.0	184.0	9,188.0	20,301.0	45.26%	46.95%
9	Hawaiian Electric	HE	1,143.0	141.8		1,216.6	2,501.4	48.64%	51.56%
10	IDACORP Inc.	IDA	1,039.9	60.1		1,025.3	2,125.3	48.24%	49.65%
11	Pinnacle West Capital	PNW	2,993.5	15.7		3,425.0	6,434.2	53.23%	53.36%
12	PHM Resources	PNM	1,746.4	332.2		1,286.5	3,365.1	38.23%	42.42%
13	Progress Energy	PGN	10,959.0	175.0	136.0	8,038.0	19,308.0	41.63%	42.01%
14	Puget Energy Inc.	PSD	2,264.0	41.0	1.9	2,027.0	4,333.9	46.77%	47.22%
15	Southern Co.	SO	11,859.0	1,258.0	596.0	10,689.0	24,402.0	43.80%	46.18%
16	Wisconsin Energy	WEC	3,527.0	456.3	30.4	2,680.1	6,693.8	40.04%	42.97%
17	Xcel Energy Inc.	XEL	6,733.3	746.1	105.0	5,395.3	12,979.7	41.57%	44.10%
18	Average							45.15%	46.74%

Electric Utility Comparison Companies - Narrow Group
"Classic" Discounted Cash Flow Analysis

			A	B	C	D	E	F	G	H
			2007 Dividend	90 Day Price	Dividend Yield	Earnings Growth Forecast				DCF Indication
			Value Line	Yahoo Finance	A/B	Value Line	I/B/E/S	Zacks	Average	C+G
1	Empire District Electric	EDE	1.28	21.98	5.82%	6.50%	3.00%	n.a.	4.75%	10.57%
2	Aliant Energy	LNT	1.25	32.65	3.83%	6.00%	4.50%	4.00%	4.83%	8.66%
3	American Electric Power	AEP	1.60	33.59	4.76%	2.50%	3.00%	3.00%	2.83%	7.60%
4	Ameren Corp	AEE	2.50	49.27	5.07%	2.50%	4.00%	6.00%	4.17%	9.24%
5	Consolidated Edison	ED	2.32	42.91	5.41%	3.00%	4.00%	3.90%	3.63%	9.04%
6	Edison International	EIX	1.18	40.63	2.90%	7.00%	7.50%	7.80%	7.43%	10.34%
7	Entergy Corp	ETR	2.32	69.36	3.34%	5.00%	7.50%	7.50%	6.67%	10.01%
8	FirstEnergy Corp	FE	1.94	50.62	3.83%	11.50%	5.00%	4.90%	7.13%	10.97%
9	Hawaiian Electric	HE	1.24	26.53	4.67%	3.00%	3.00%	5.20%	3.73%	8.41%
10	IDACORP Inc.	IDA	1.20	32.92	3.64%	4.50%	5.00%	4.50%	4.67%	8.31%
11	Pinnacle West Captial	PNW	2.13	39.48	5.39%	6.00%	6.00%	6.80%	6.27%	11.66%
12	PNM Resources	PNM	0.92	24.65	3.73%	5.50%	12.00%	8.30%	8.60%	12.33%
13	Progress Energy	PGN	2.50	42.66	5.86%	1.50%	3.50%	3.90%	2.97%	8.83%
14	Puget Energy Inc.	PSD	1.00	20.86	4.79%	5.00%	3.50%	7.00%	5.17%	9.96%
15	Southern Co.	SO	1.62	31.99	5.06%	5.00%	5.00%	4.80%	4.93%	10.00%
16	Wisconsin Energy	WEC	0.96	39.52	2.43%	5.00%	8.00%	7.00%	6.67%	9.10%
17	Xcel Energy Inc.	XEL	0.93	18.40	5.05%	6.00%	4.50%	4.20%	4.90%	9.95%
18	Average				4.36%	4.94%	5.38%	5.55%	5.29%	9.65%

Electric Utility Comparison Companies - Broad Group
"Classic" Discounted Cash Flow Analysis

			A	B	C	D	E	F	G	H
			2007 Dividend	90 Day Price	Dividend Yield	Earnings Growth Forecast				DCF Indication
			Value Line	Yahoo Finance	A/B	Value Line	I/B/E/S	Zacks	Average	C+G
1	Empire District Electric	EDE	1.28	21.98	5.82%	6.50%	3.00%		4.75%	10.57%
2	Aliant Energy	LNT	1.25	32.65	3.83%	6.00%	4.50%	4.00%	4.83%	8.66%
3	American Electric Power	AEP	1.60	33.59	4.76%	2.50%	3.00%	3.00%	2.83%	7.60%
4	Ameren Corp	AEE	2.50	49.27	5.07%	2.50%	4.00%	6.00%	4.17%	9.24%
5	Consolidated Edison	ED	2.32	42.91	5.41%	3.00%	4.00%	3.90%	3.63%	9.04%
6	Dominion Resources	D	2.84	72.14	3.94%	16.50%	11.00%	9.50%	12.33%	16.27%
7	DTE Energy	DTE	2.06	40.66	5.07%	6.50%	4.00%	5.50%	5.33%	10.40%
8	Edison International	EIX	1.18	40.63	2.90%	7.00%	7.50%	7.80%	7.43%	10.34%
9	Energy East Corp.	EAS	1.24	23.96	5.18%	4.00%	4.00%	4.50%	4.17%	9.34%
10	Entergy Corp	ETR	2.32	69.36	3.34%	5.00%	7.50%	7.50%	6.67%	10.01%
11	FirstEnergy Corp	FE	1.94	50.62	3.83%	11.50%	5.00%	4.90%	7.13%	10.97%
12	Great Plains Energy	GXP	1.66	27.87	5.96%	0.00%	2.50%	3.50%	2.00%	7.96%
13	Hawaiian Electric	HE	1.24	26.53	4.67%	3.00%	3.00%	5.20%	3.73%	8.41%
14	IDACORP Inc.	IDA	1.20	32.92	3.64%	4.50%	5.00%	4.50%	4.67%	8.31%
15	Northeast Utilities	NU	0.76	19.68	3.86%	11.00%	7.00%	8.70%	8.90%	12.76%
16	NSTAR	NST	1.26	27.67	4.55%	6.00%	5.00%	5.00%	5.33%	9.89%
17	Otter Tail Corp.	OTTR	1.18	28.38	4.16%	4.00%	4.50%	5.00%	4.50%	8.66%
18	PEPCO Holdings	POM	1.08	22.64	4.77%	7.50%	4.00%	5.00%	5.40%	10.17%
19	Pinnacle West Captial	PNW	2.13	39.48	5.39%	6.00%	6.00%	6.80%	6.27%	11.66%
20	PNM Resources	PNM	0.92	24.65	3.73%	5.50%	12.00%	8.30%	8.60%	12.33%
21	PPL Corp.	PPL	1.20	29.49	4.07%	9.50%	9.00%	8.30%	8.93%	13.00%
22	Progress Energy	PGN	2.50	42.66	5.86%	1.50%	3.50%	3.90%	2.97%	8.83%
23	Puget Energy Inc.	PSD	1.00	20.86	4.79%	5.00%	3.50%	7.00%	5.17%	9.96%
24	SCANA Corp.	SCG	1.80	38.62	4.66%	4.50%	5.00%	4.70%	4.73%	9.39%
25	Southern Co.	SO	1.62	31.99	5.06%	5.00%	5.00%	4.80%	4.93%	10.00%
26	Wisconsin Energy	WEC	0.96	39.52	2.43%	5.00%	8.00%	7.00%	6.67%	9.10%
27	Xcel Energy Inc.	XEL	0.93	18.40	5.05%	6.00%	4.50%	4.20%	4.90%	9.95%
28	Average				4.46%	5.71%	5.46%	5.70%	5.62%	10.09%

Electric Utility Comparison Companies - Narrow Group
Selected Utility Beta Values, June 2006

		Thomson	Value Line	Zacks.com	Average	
1	Empire District Electric	EDE	0.68	0.75	0.45	0.63
2	Aliant Energy	LNT	0.63	0.85	0.55	0.68
3	American Electric Power	AEP	0.64	1.20	0.84	0.89
4	Ameren Corp	AEE	0.48	0.75	0.33	0.52
5	Consolidated Edison	ED	0.42	0.70	0.11	0.41
6	Edison International	EIX	0.64	1.10	0.53	0.76
7	Entergy Corp	ETR	0.62	0.85	0.30	0.59
8	FirstEnergy Corp	FE	0.53	0.80	0.28	0.54
9	Hawaiian Electric	HE	0.74	0.70	0.31	0.58
10	IDACORP Inc.	IDA	0.82	0.95	0.80	0.86
11	Pinnacle West Captial	PNW	0.69	0.95	0.82	0.82
12	PNM Resources	PNM	0.88	0.95	1.24	1.02
13	Progress Energy	PGN	0.61	0.85	0.46	0.64
14	Puget Energy Inc.	PSD	0.53	0.80	0.37	0.57
15	Southern Co.	SO	0.35	0.65	(0.05)	0.32
16	Wisconsin Energy	WEC	0.72	0.75	0.15	0.54
17	Xcel Energy Inc.	XEL	0.54	0.85	1.10	0.83
18	Average					0.66

**Electric Company Comparison Group
Capital Asset Pricing Model**

	A	B
Market Return - DCF		
1 Median Dividend Yield, Next 12 Months	Value Line	1.60%
2 Appreciation Potential 3-5 years, 1700 Stocks	Value Line	50.00%
3 Annual Appreciation Potential	Ln 3 ²⁵	10.67%
4 Total Market Return	Ln 1 + Ln 3	12.27%
Risk-Free Rate		
5 30-year US Treasury Bond Yield, June 2,2006	federalreserve.gov	5.17%
Current Market Risk Premium		
6 Market Return less Treasury Bond Yield	Ln 4-Ln 5	7.10%
7 Average beta, Electric Company Group	Schedule CWK-7	0.66
8 Risk Premium for Electric Company Group	Ln 6 * Ln 7	4.68%
9 CAPM Rate of Return	Ln 5 + Ln 8	9.85%