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GULF POWER COMPANY

DOCKET HUMBER 891345-EI

DIRECT TESTIMONY OF SCOTT SEERY

ON BEHALF OF

THE STAFF OF THE FLORIDA PUBLIC SERVICE COMMISSION

DIVISION OF AUDITING AND FINANCIAL ANALYSIS

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#### 1 DIRECT TESTIMONY OF SCOTT SEERY Please state your name and business address. 2 3 My name is Scott Seery. Hy business address is 101 Easi 4 Gaines Street, Tallahassee, Florida, 32399-0850. By whom are you employed and in what capacity? 5 I am employed by the Florida Public Service Commission as a 6 regulatory analyst in the Bureau of Finance. 7 O Please outline your educational qualifications and 8 9 experience. I received a Bachelor of Science degree in Business 10 Administration, with honors, in 1976 from West Virginia 11 12 University and a Master of Business Administration degree with a concentration in Finance from the University of South Florida in 13 14 1985. Prior to accepting my current position with the Florida 15 Public Service Commission in January of 1986, I was employed as 16 a buyer for Mercantile Stores Company Incorporated. My 17 18 responsibilities included purchasing, inventory control, and sales supervision. 19 Shortly after obtaining my MBA in Finance, I began 20 employment as a regulatory analyst with the Florida Public 21 Service Commission, where my primary responsibilities have 22

consisted of analyzing and evaluating financial, economic, and

statistical data relating to rate of return testimony in utility

rate proceedings and preparing and presenting recommendations to

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| 1  | the Commission based upon this data. I have also researched      |
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| 2  | other related topics and have previously presented cost of       |
| 3  | equity testimony before the Commission.                          |
| 4  | I am a member of the Financial Management Association            |
| 5  | and the National Society of Rate of Return Analysts.             |
| 6  | Q What is the purpose of your testimony?                         |
| 7  | A The purpose of my testimony is to establish the appropriate    |
| 8  | cost of common equity capital for Gulf Power Company (Gulf       |
| 9  | Power) for use in determining an appropriate allowed rate of     |
| 10 | return for Gulf Power.   |
| 11 | My testimony will also address the appropriate                   |
| 12 | regulatory treatment of non-utility related assets, temporary    |
| 13 | cash investments, and continuing cash balances when reconciling  |
| 14 | rate base and capital structure.                                 |
| 15 | Q What principles provided the legal framework for your          |
| 16 | determination of a fair rate of return?                          |
| 17 | A The principles established by the Supreme Court of the         |
| 18 | United States in Bluefield Waterworks and Improvement Company v. |
| 19 | Public Service Commission of West Virginia, 262 U.S. 679 (1923)  |
| 20 | and Federal Power Commission v. Hope Natural Gas Company 320     |
| 21 | U.S. 591 (1944) provided the primary legal basis for my          |
| 22 | analysis. The Supreme Court held in both the Hope and Bluefield  |
| 23 | decisions that the return to the equity owner should be          |
| 24 | commensurate with returns on investments in other enterprises    |
| 25 | having corresponding risks. The return, moreover, should be      |
|    |  |

| 1  | sufficient to assure confidence in the financial integrity of    |
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| 2  | the enterprise so as to maintain credit and attract capital.     |
| 3  | Q In addition to the principles established by the Hope and      |
| 4  | Bluefield decisions, what other guidelines did you consider?     |
| 5  | A Based upon my understanding of the Hope and Bluefield          |
| 6  | decisions, a regulated utility should be allowed to recover all  |
| 7  | costs prudently incurred in the provision of utility service,    |
| 8  | including an appropriate return on common equity capital.        |
| 9  | Recovery of all prudently incurred costs, including capital      |
| 10 | costs, effectively balances the interests of investors and       |
| 11 | ratepayers. Investors are provided with a return commensurate    |
| 12 | with returns on investments of comparable risk, while ratepayers |
| 13 | pay the true cost for the services provided.                     |
| 14 | Q How does the allowed return on common equity relate to a       |
| 15 | balancing of the interests of investors and ratepayers?          |
| 16 | A The adequacy of expected earnings can be determined by a       |
| 17 | comparison of the market price of a firm's common stock to its   |
| 18 | book value. If the expected return on common equity equals       |
| 19 | investor requirements, the market-to-book ratio can be expected  |
| 20 | to approximate one over the long run. If the expected return or  |
| 21 | book equity exceeds the cost of common equity investors will bid |
| 22 | the price of the stock up, such that the market price per share  |
| 23 | exceeds the book value per share, resulting in a market-to-book  |
| 24 | ratio above one. The market price will move up or down in        |
| 25 | response to the level of the utility's expected returns relative |

| 1 to | the | investor's | risk | driven. | required | rate | of | return. | To | th |
|------|-----|------------|------|---------|----------|------|----|---------|----|----|
|------|-----|------------|------|---------|----------|------|----|---------|----|----|

- 2 extent utility rates reflect a return above that required by
- 3 investors ratepayers are overcharged. Conversely, if a
- 4 utility's market-to-book ratio is less than one, external issues
- 5 of common stock will confiscate shareholders' wealth through the
- 6 dilution of earnings per share and book value per share.
- 7 Therefore, regulators should strive to set authorized rates of
- 8 return that result in market-to-book ratios of approximately 1.0
- 9 over the long run.
- 10 Q How does your analysis of a fair rate of return on Gulf
- 11 Power's common equity capital meet these basic legal criteria?
- 12 A My analysis of an appropriate rate of return on Gulf Power's
- 13 common equity capital is based upon an evaluation of return
- 14 requirements for comparable risk common equity investments as
- 15 determined through the direct application of capital market
- 16 valuation models to current financial and economic data. In my
- 17 opinion, a market based equity pricing analysis satisfies the
- 18 comparable returns, capital attraction, and financial integrity
- 19 guidelines established by Hope and Bluefield for determining a
- 20 fair and reasonable rate of return on common equity capital.
- 21 Q What have you concluded is the cost of common equity capital
- 22 for Gulf Power?
- 23 A Based upon the results of my analysis, I conclude the
- 24 current cost of common equity capital for Gulf Power is 12.10%.
- 25 Q Hould you describe your general approach to measuring Gulf

- 1 Power's equity cost rate?
- 2 A In order to properly evaluate the returns obtained through
- 3 use of a market based equity pricing analysis, I first examined
- 4 general economic conditions, as well as industry and company
- 5 factors, which drive capital market return requirements. I then
- 6 applied two generally accepted market rate of return models to
- 7 an index of comparable companies as a means to estimate Gulf
- 8 Power's cost of common equity capital.
- 9 Q How do economic conditions impact capital market return
- 10 requirements?
- 11 A The interrelated factors of inflation and interest rates
- 12 have a significant impact on investor return requirements.
- 13 O Please elaborate.
- 14 A Increases in the general level of prices affect interest
- 15 rates because investors are unwilling to commit their funds
- 16 unless they are adequately protected against future losses in
- 17 purchasing power. If investors anticipate a higher rate of
- 18 inflation they will adjust their return requirements upward to
- 19 guard against the erosion of purchasing power.
- 20 In addition, accelerating inflation and rising interest
- 21 rates increase the uncertainty surrounding a firm's earnings and
- 22 dividends. Historically, the utility industry has been
- 23 particularly vulnerable to the effects of high inflation and
- 24 high interest rates. During periods of accelerating inflation,
- 25 earnings deterioration has resulted from rising labor and other

- 1 operating expenses and also from the substantial impact of
- 2 increasing plant costs and the associated financing due to the
- 3 capital intensive nature of the utility industry.
- 4 Q Have you examined changes in inflation rates?
- 5 A Yes, I have. Schedule 1 shows the level of inflation as
- 6 measured by the Consumer Price Index.
- 7 Q Have you examined changes in interest rates?
- 8 A Yes, I have. Page 1 of Schedule 2 is a graph for yields on
- 9 seasoned "A" rated utility bonds. These bonds averaged
- 10 approximately 9.77% during 1989 and 10.49% in 1988. The monthly
- 11 average for March was 9.85%. The yield on the bellwether
- 12 30-year Treasury bond averaged 8.44% during 1989. The current
- 13 yield on the 30-year Treasury bond is 8.96%.
- 14 Q Please discuss the current economic environment and current
- 15 expectations regarding inflation and interest rates.
- 16 A The U.S. economy slowed appreciably in the fourth quarter of
- 17 1989, impacted by such factors as the earthquake in California,
- 18 a strike at the Boeing Company, and a reduction in consumer
- 19 spending. Recently, however, the economy has begun to show some
- 20 signs of renewed vigor.
- 21 In March of this year, the civilian unemployment rate
- 22 fell to 5.2% after remaining at 5.3% for nine consecutive
- 23 months. Although payrolls grew by a modest 26,000 people in
- 24 March, employers hired over 700,000 new workers in the first two
- 25 months of this year.

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| 1  | The retail sector accounts for approximately one third           |
| 2  | of the nation's economic activity. Retail sales fell by 0.6% in  |
| 3  | March after declining 0.3% in February. However, excluding       |
| 4  | automobile sales, which remain troublesome, retail sales were up |
| 5  | 1.1% in January, 1.5% in February, and down 0.4% in March.       |
| 6  | Given the strong gains posted in both January and February, most |
| 7  | economists do not find the slip in March alarming. Further,      |
| 8  | despite recent surveys that indicate a decline in consumer       |
| 9  | confidence, many economists believe consumer spending remains    |
| 10 | strong enough to sustain continued economic growth.              |
| 11 | Industrial production increased by 0.7% in March                 |
| 12 | following a 0.6% increase in February. Industrial capacity       |
| 13 | utilization rose in March to 83.3% from the 82.9% level recorded |
| 14 | in February. Analysts said a return to normal temperatures,      |
| 15 | following an unseasonably warm February, caused a surge in       |
| 16 | utility output, which, in conjunction with increased automobile  |
| 17 | production, accounted for the increased production in March. In  |
| 18 | addition, the latest Commerce Department report indicates that   |
| 19 | business inventories decreased by 0.4% in February, at the same  |

As it has for much of the recent past, the specter of inflation remains on the horizon posing a threat to continued economic expansion. Over the past 12 months, producer prices have increased by 4.4%. However, excluding the typically

times sales increased by 1.3%, keeping inventories at manageable

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levels.

- 1 volatile food and energy costs, prices grew at a more moderate 2 3.8% pace over the past year. A more widely followed measure of inflation, the Consumer Price Index increased by 0.5% in March. 3 the same rate as in February. The March increase pushes the rate of inflation for the first guarter to an 8.5% annual rate. 5 the highest quarterly rate since the first quarter of 1990. 7 Many economists believe the latest numbers indicate that inflation remains a persistent problem. 8 9 Many analysts believe the latest inflation numbers will prevent any easing of interest rates by the Fed. Over the past 10 year, the Fed has been keeping interest rates high in an effort 11 to curb demand and reduce upward pressure on prices. Although 12 higher interest rates have served to slow the economy, many 13 economists believe the Fed has made progress in controlling, but 14 not reducing, inflation. 15 What other economic factors have you considered? 16 The trade and budget deficits continue to overshadow the 17 performance of the U.S. economy. The trade deficit narrowed by 18 \$2.83 billion in February, to \$6.49 billion, the smallest 19 monthly imbalance since December 1983. Imports, which fell by
- 23 January. A significant reduction in U.S. purchases of foreign 24 oil, reflecting both a decline in prices and a reduction in 25

7.6%, accounted for the marked improvement. However, at the

same time, exports fell 1% from the record high reached in

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volume, led the drop in imports. Accompanying the recent progress made in reducing the trade deficit has been a reduction in the gap in the U.S. balance of payments which fell to \$105.88 billion in 1989, the lowest level in five years.

Congress enacted legislation in 1989 allowing the national debt level to rise to \$3.1 trillion, an amount over three times the \$1 trillion mark reached in 1980. Many analysts believe the prospects for near-term improvement in the budget deficit are bleak. However, U.S. Representative Daniel Rostenkowski, Chairman of the U.S. House of Representatives Ways and Means Committee, recently introduced a deficit reduction plan calling for a \$511.6 billion reduction over five years (1990-1995). The deficit reduction plan proposes to balance the budget in three years and achieve a budget surplus by fiscal year 1994.

Analysts contend that the continuation of such huge trade and budget deficits erodes confidence in both the dollar and the U.S. economy and, absent productivity gains, will reduce the standard of living in the U.S.

The future course of the economy and of inflation remains unclear. In any case, a component of required yields is compensation for expected inflation, the level of which directly affects the cost of debt and equity. Schedule 3 is a summary of various interest rates and inflation rates. Schedule 3 also shows Blue Chip forecasts for various measures of inflation and

| 1   | interest rates.  |
|-----|--|
| 2   | In summary, electric stocks remain sensitive to                  |
| 3   | interest rates and inflation. Investor perceptions of higher     |
| 4   | interest rates would place downward pressure on electric utility |
| 5   | stock prices. Conversely, a slowing economy and falling          |
| 6   | interest rates could cause electric utility stock prices to rise |
| 7   | since utility stocks are generally regarded as defensive issues. |
| 8   | Q What financial models did you use to determine the required    |
| 9   | return on common equity for Gulf Power?                          |
| 10  | A I used a two-stage, annually compounded discounted cash flow   |
| 11. | (DCF) model and a risk premium analysis to determine the         |
| 12  | required return on common equity.                                |
| 13  | Q How did you apply these models to obtain Gulf Power's cost     |
| 14  | of common equity capital?  |
| 15  | A I conducted a DCF and a risk premium analysis on an index of   |
| 16  | high quality electric utilities and adjusted the results for the |
| 17  | difference in risk between Gulf Power and the index. Relying on  |
| 18  | an index of companies, rather than a single company, helps       |
| 19  | minimize forecasting errors and should provide more reliable     |
| 20  | information for estimating the cost of common equity.            |
| 21  | Q Please describe the investment risk characteristics of the     |
| 22  | companies that comprise your index.                              |
| 23  | A The investment risk characteristics for the index are: a       |
| 24  | Value Line Safety Rank of 1; a Value Line beta of .70; an S&P    |
| 25  | stock ranking of A; and an S&P and a Moody's bond rating of AA   |

- 1 and Aa2, respectively. Schedules 4 provides the investment risk
- 2 characteristics for the index.
- 3 Q Briefly describe the models you used.
- 4 A The discounted cash flow model is the most commonly used
- 5 market based approach for estimating a utility investor's
- 6 expected return on equity capital. In a DCF analysis, the cost
- 7 of equity is the discount rate which equates the present value
- 8 of expected cash flows associated with a share of stock to the
- 9 present price of the stock.
- 10 A risk premium analysis recognizes that equity is
- 11 riskier than debt. Equity investors thus require a "risk
- 12 premium" over the cost of debt as compensation for assuming
- 13 additional risk.
- 14 Q Would you provide the equation and define the terms for the
- 15 discounted cash flow model?
- 16 A Yes, I will. This information is provided on Schedule 7.
- 17 Inherent in this basic model are several simplifying
- 18 assumptions: 1) dividends are paid annually and grow at a
- 19 constant rate; 2) the price, Po, is determined on a dividend
- 20 payment date; and 3) dividends increase once a year starting
- 21 exactly one year hence.
- 22 Q Is Equation (4), Schedule 7, the DCF model you used to
- 23 determine the cost of common equity capital?
- 24 A No. it is not. As mentioned above, the basic DCF model
- 25 assumes that dividend growth rate is constant over time. If,

- 1 however, the future growth rate is expected to change, a
- 2 two-stage or variable growth rate model should be used.
- 3 Equation (5) on Schedule 8, shows a two-stage DCF model. In the
- 4 two-stage model, dividend growth is estimated on an individual
- 5 basis for an initial growth period. Dividends are then assumed
- 6 to grow infinitely at the expected long-term growth rate.
- 7 Q How did you use this model to determine the cost of common
- 8 equity capital for the index?
- 9 A The current stock price (Po) was determined by averaging
- 10 the high and the low stock price for March 1990 of each
- 11 company. I first assumed an initial growth period based upon
- 12 Value Line's explicit dividend forecasts (n). I used Value
- 13 Line's forecast of dividends for 1990 and 1993, and assumed a
- 14 constant rate of growth in between to estimate the expected
- 15 dividends (D,) during the initial growth period. The
- 16 long-term constant rate of growth expected after 1993 (gn) was
- 17 calculated by the earnings retention method (b x r approach)
- 18 using Value Line's expected return on equity (r) and expected
- 19 retention rate (b) for 1993.
- 20 Q Does you DCF calculation include an allowance for issuance
- 21 costs?
- 22 A Yes, it does. Historically, utility underwriting expenses
- 23 associated with issuing common stock have averaged 3 to 4
- 24 percent of gross proceeds. Therefore, I believe a 3% adjustment
- 25 to the DCF calculation to account for issuance costs is

- 1 appropriate. (See, Pettway, R.H., "A Note on the Flotation
- 2 Costs of New Equity Capital Issues of Electric Companies",
- 3 Public Utilities Fortnightly, March 18, 1982 pp. 68-69.)
- 4 Equation (6). Schedule 8, includes the adjustment for issuance
- 5 costs.
- 6 Q What is the cost of common equity for the index companies
- 7 based upon your two-stage, annually compounded DCF model?
- 8 A Solving Equation (6) on Schedule 8, produces a cost of
- 9 common equity for the index of 11.00%. Schedule 9 contains the
- 10 inputs and results of my analysis.
- 11 O Please describe the risk premium analysis.
- 12 A The junior position of equity relative to debt adds
- 13 additional uncertainty to the return of equity owners. Equity
- 14 owners require compensation for this added risk. A risk premium
- 15 analysis quantifies this additional compensation and adds it to
- 16 the cost rate of debt to then estimate the cost of common
- 17 equity. The equation expressing the basic risk premium model is
- 18 contained on Schedule 10.
- 19 Q How did you begin the risk premium analysis?
- 20 A I relied upon the risk premium study prepared by the staff
- 21 of the Finance Bureau. The analysis first uses the DCF
- 22 methodology discussed above to estimate the expected market
- 23 return for the index for each month from April 1980 through
- 24 March 1990.
- 25 Q How is the equity-debt risk premium measured?

- 1 A For each month of the period, the expected return on common
- 2 equity was compared to the then current yield on long-term
- 3 government bonds, as reported by Moody's, to determine the risk
- 4 premium for common equity over the yield of long-term government
- 5 bonds.
- 6 Q What is your estimate of the equity-debt risk premium for
- 7 the index?
- 8 A As shown on Schedule 11, the equity-debt risk premium for
- 9 the index average 3.191% over the period 1980-1990.
- 10 Q What measure of debt cost did you add to the risk premium to
- 11 determine the cost of equity?
- 12 A I used the April 1, 1990 Blue Chip Financial Forecasts'
- 13 (Blue Chip) consensus forecast for long-term government bond
- 14 yields for the coming year of 8.260%. Blue Chip is a
- 15 publication that provides interest rate forecasts from 50
- 16 leading financial forecasters.
- 17 Q What is the risk premium cost of common equity for the index?
- 18 A As shown on Schedule 10, combining the average expected
- 19 yield on long-term government bonds of 8.260% with the
- 20 equity-debt risk premium of 3.191% results in a risk premium
- 21 cost of equity of 11.50% (rounded) for the index.
- 22 Q Based upon your DCF analysis and your risk premium analysis,
- 23 what is your conclusion as to the cost of common equity for the
- 24 index?
- 25 A Based upon my DCF and risk premium analyses, I believe the

- 1 cost of common equity for the index is within the range of
- 2 11.00% to 11.50%.
- 3 Q Is this result an appropriate measure of the cost of common
- 4 equity to Gulf Power?
- 5 A No. it is not. The cost of common equity for an index of
- 6 companies possessing the risk characteristics discussed earlier
- 7 and illustrated on Schedule 4 is, in my estimate, between 11.00%
- 8 and 11.50%. However, in my opinion, Gulf Power is riskier than
- 9 the index and should therefore be allowed a higher cost of
- 10 equity.
- 11 Q Have you examined the investment risk characteristics of
- 12 Gulf Power?
- 13 A Yes, I have, Schedule 6 shows Gulf Power's earned returns,
- 14 coverage ratios, percent AFUDC to net income ratios and percent
- 15 internally generated funds ratios for the last five years.
- 16 Schedule 5 provides financial ratios for "A" rated electric
- 17 utilities and Schedule 4, page 2 of 2, provides the information
- 18 necessary to compare the AA/Aa electric index to Gulf Power with
- 19 regard to debt leverage, return on equity, coverage ratio,
- 20 percent of AFUDC to net income, and percent of internally
- 21 generated funds.
- 22 Q In general, how does the investment risk of Gulf Power
- 23 compare to that of the electric index?
- 24 A Gulf Power is riskier than the electric index. It has a
- 25 lower bond rating, A/A, as compared to an average Aa/AA for the

| 1  | electric index. This rating is affected by such factors as debt  |
|----|--|
| 2  | leverage and interest coverage. As shown on Schedules 4, 5, and  |
| 3  | 6. Gulf Power has significantly higher debt leverage and much    |
| 4  | lower interest coverage ratios than the index. Additionally,     |
| 5  | Schedule 5 shows the equity ratio, debt leverage, coverage       |
| 6  | ratio, and net cash flow to capital spending for Gulf Power and  |
| 7  | comparable "A" rated electric utilities. Relative to comparable  |
| 8  | "A" rated utilities Gulf Power has a lower equity ratio, higher  |
| 9  | debt leverage, and a lower coverage ratio.                       |
| 10 | Q What adjustment have you made to reflect the difference in     |
| 11 | risk between Gulf Power and the index?                           |
| 12 | A First, I used a bond rating differential to estimate the       |
| 13 | additional return required by an "A" rated electric utility over |
| 14 | the "AA" rated index. As indicated on Schedule 12, the average   |
| 15 | spread between "AA" and "A" bonds has been approximately 30      |
| 16 | basis points over the past 60 months. Adding this spread to the  |
| 17 | index's cost of equity range of 11.00% to 11.50% results in a    |
| 18 | cost of equity range of 11.30% to 11.80%. I believe that,        |
| 19 | generally, a bond yield differential is a reasonable method to   |
| 20 | estimate the difference in the cost of common equity when        |
| 21 | examining companies of different bond ratings. However, given    |
| 22 | Gulf Power's lower equity ratio, higher debt leverage, and lower |
| 23 | coverage ratio relative to comparable "A" and "AA" rated         |
| 24 | electric utilities. I believe an additional premium, from the    |
| 25 | top of the adjusted range, is warranted to arrive at Gulf        |

| 1  | Power's cost of common equity.                                   |
|----|--|
| 2  | As shown on Schedule 14, applying a 12.10% return on             |
| 3  | common equity, 30 basis points above the top of the adjusted     |
| 4  | range, results in a pretax times interest earned (TIE) ratio and |
| 5  | pretax cost of capital comparable to that which would have been  |
| 6  | incurred by Gulf Power if their debt leverage and equity ratio   |
| 7  | were similar to the average of the utilities comprising the "A"  |
| 8  | rated index. The resulting TIE ratio also compares favorably     |
| 9  | with other "A" rated electric utilities and with the benchmark   |
| 10 | guidelines provided by S&P.                                      |
| 11 | Q Why did you use annually compounded, rather than quarterly     |
| 12 | compounded, models in your analysis to determine the cost of     |
| 13 | common equity capital to Gulf Power?                             |
| 14 | A In Docket No. 880558-EI, the Commission expressed their        |
| 15 | opinion that the specificity obtained by recognizing the effects |
| 16 | of compounding to determine the cost of equity was an            |
| 17 | unnecessary refinement. Therefore, I have conducted an analysis  |
| 18 | using annually compounded models, the results of which, in my    |
| 19 | opinion, approximate the appropriate point at which rates should |
| 20 | be set to meet investor return requirements.                     |
| 21 | Q Please continue.   |
| 22 | A In my opinion, the use of models that accurately reflect the   |
| 23 | receipt and timing of cash flows provides a better estimate of   |

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the cost of equity. However, using the results derived from a

quarterly DCF model without making a ratemaking rate of return

- 1 adjustment is inconsistent. The ratemaking rate of return
- 2 adjustment recognizes the time value of money associated with
- 3 the Company's monthly receipt of revenues. It is inconsistent
- 4 to selectively recognize the time value associated with the
- 5 investor's quarterly receipt of dividends, through use of a
- 6 quarterly model, and then not recognize the time value
- 7 associated with the Company's monthly receipt of revenues.
- 8 Ignoring the Company's monthly receipt of revenues, as reflected
- 9 in the 13-month average equity balance, overestimates the point
- 10 at which rates should be set.
- 11 Q What is your recommendation regarding the appropriate
- 12 regulatory treatment of non-utility related property and
- 13 non-regulated subsidiaries?
- 14 A I recommend non-utility property and non-regulated
- 15 subsidiaries be removed from the capital structure directly from
- 16 equity unless the Company can show, through competent evidence.
- 17 that to do otherwise would result in a more equitable
- 18 determination of the cost of capital for regulatory purposes.
- 19 Q In making this recommendation are you assuming the
- 20 investment in non-regulated assets can be traced directly to
- 21 equity funds?
- 22 A No. Assets cannot be associated with specific sources of
- 23 funds. Funds are fungible.
- 24 Q If funds cannot be traced, why do you recommend, in the
- 25 absence of persuasive evidence to the contrary, non-regulated

| 1  | property and non-regulated subsidiaries be removed from equity? |
|----|---|
| 2  | A I recommend this treatment for two reasons. The first is      |
| 3  | the basic principle that the cost of capital allowed for        |
| 4  | ratemaking purposes should be the cost of capital associated    |
| 5  | with the provision of utility service. The second relates to    |
| 6  | the signals and incentives sent to the companies.               |
| 7  | Q Please continue.  |
| 8  | A The cost of capital is the minimum rate of return necessary   |
| 9  | to attract capital to an investment. It is a function of the    |
| 10 | risk of the investment. The greater the risk the greater the    |
| 11 | return investors require.                                       |
| 12 | Regulated entities are of relatively low risk and have          |
| 13 | correspondingly low costs of capital. There are very few        |
| 14 | investments a regulated company can make that are of equal or   |
| 15 | lower risk. Therefore, investments in non-regulated             |
| 16 | subsidiaries will almost certainly increase a regulated         |
| 17 | utility's cost of capital. The effects may be difficult to      |
| 18 | quantify, but the fundamental risk-return relationship points t |
| 19 | their existence. It is important that these effects be removed  |
| 20 | from the Company's overall cost of capital in order that        |
| 21 | ratepayers are charged only for the cost of capital associated  |
| 22 | with the provision of regulated service.                        |
| 23 | Removing the effects of investments in non-utility              |
| 24 | property can present a more difficult problem. For example, it  |
| 25 | may be difficult to quantify the cost of capital effects        |

| •  | associated with a defirity divider 5 por charge or an accommodite |
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| 2  | for personal use. In this circumstance, I believe the signals     |
| 3  | and incentives associated with the Commission's policies should   |
| 4  | be of primary concern. If a utility can finance non-utility       |
| 5  | property at the utility's cost of capital rather than at market   |
| 6  | rates, it will have every economic incentive to do so. If this    |
| 7  | is allowed to occur, ratepayers will be subsidizing, through      |
| 8  | capital costs, investments not necessary for the provision of     |
| 9  | regulated service.  |
| 10 | Q What is your position as to the appropriate regulatory          |
| 11 | treatment of cash and temporary cash investment balances?         |
| 12 | A In my opinion, the appropriate regulatory treatment of          |
| 13 | either continuing cash balances or temporary cash investments     |
| 14 | should depend upon their prudency. If the utility can             |
| 15 | demonstrate, through competent evidence, that their cash          |
| 16 | balances or temporary cash investments are necessary for the      |
| 17 | provision of regulated utility service they should remain in      |
| 18 | rate base and earn at the utility's overall rate of return. Any   |
| 19 | earnings generated by these funds should then be used to offset   |
| 20 | revenue requirements. In general, short-term investments can be   |
| 21 | expected to earn less that the utility's overall cost of          |
| 22 | capital. Therefore, a blanket policy of excluding temporary       |
| 23 | cash investments from rate base could result in an asset,         |
| 24 | potentially necessary for the provision of regulated service,     |
| 25 | earning less than a fair rate of return.                          |

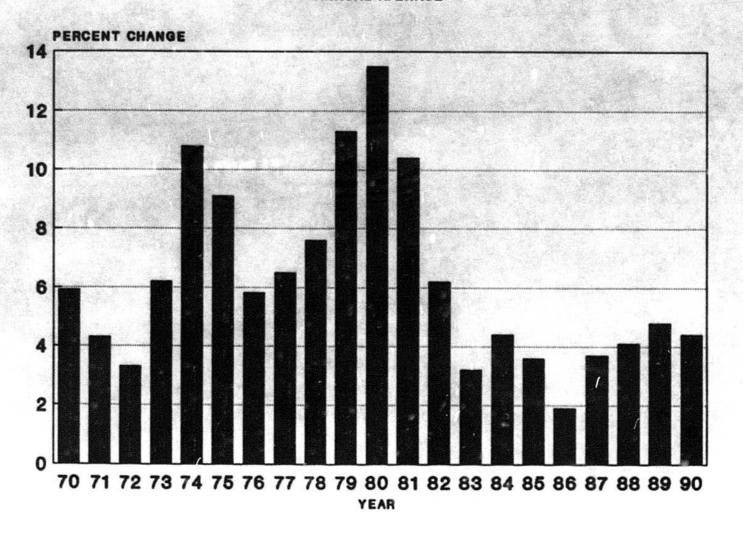
| 1  | However, if the utility fails to demonstrate the                |
|----|---|
| 2  | prudency of either their temporary cash investments or          |
| 3  | continuing cash balances, they should be removed directly from  |
| 4  | equity when reconciling the capital structure with rate base.   |
| 5  | Such treatment removes the capital structure implications of    |
| 6  | excessive cash or temporary cash investments. In a competitive  |
| 7  | environment the cost of poorly managed cash resources cannot be |
| 8  | passed through to customers, instead, shareholders bear the     |
| 9  | cost. Similar treatment by the Commission would mirror the      |
| 10 | competitive environment and send appropriate signals to utility |
| 11 | owners and managers regarding cash balances and working capital |
| 12 | allowances.   |
| 13 | Q Please summarize your testimony.                              |
| 14 | A The purpose of my testimony was to determine the appropriate  |
| 15 | cost of common equity capital for Gulf Power to use in          |
| 16 | determining an appropriate allowed overall rate of return. I    |
| 17 | also discussed the appropriate regulatory treatment of          |
| 18 | non-utility property and non-regulated subsidiaries, temporary  |
| 19 | cash investments, and continuing cash balances when reconciling |
| 20 | rate base and capital structure.                                |
| 21 | Using the widely accepted discounted cash flow and risk         |
| 22 | premium methodologies I estimated a cost of common equity range |
| 23 | of 11.00% to 11.50% for an index of "Aa/Aa" rated electric      |
| 24 | utilities. I then adjusted this range to account for the        |
| 25 | difference in risk between Gulf Power and the index. I          |

| 1  | determined that Gulf Power's cost of common equity fell within a |
|----|--|
| 2  | range of 11.30% to 12.10%. Given Gulf Power's higher debt        |
| 3  | leverage, lower equity ratio, and lower coverage ratio relative  |
| 4  | to both the "AA" and "A" indices I examined, it is my opinion    |
| 5  | that the top of the range, 12.10% best represents Gulf Power's   |
| 6  | cost of common equity capital. Schedule 15 summarizes my         |
| 7  | conclusions regarding the cost of common equity capital.         |
| 8  | I also recommend that non-utility property and                   |
| 9  | non-regulated subsidiaries be removed from the capital structure |
| 10 | directly from equity unless the company can show, through        |
| 11 | competent evidence, that to do otherwise would result in a more  |
| 12 | equitable determination of the cost of capital for regulatory    |
| 13 | purposes. In addition, I recommend that, absent a showing of     |
| 14 | their prudency, temporary cash investments and continuing cash   |
| 15 | balances be removed directly from equity when reconciling the    |
| 16 | capital structure with rate base.                                |
| 17 | Q Does this conclude your testimony?                             |
| 18 | A Yes, it does.  |
| 19 |  |
| 20 |  |
| 21 |  |
| 22 |  |
| 23 |  |
| 24 |  |

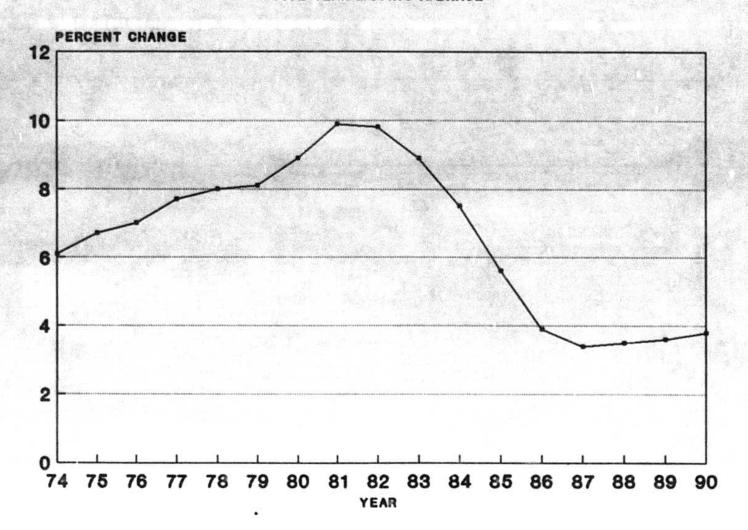
#### LISTING OF EXHIBITS

| Schedule No | . 1  | The Consumer Price Index - Average Annual Percentage Changes and the Five Year Moving Average                  |
|-------------|------|--|
| Schedule No | . 2  | Yield on Seasoned "A" Utility Bonds - Annual<br>Average Percentage Changes and the Five Year<br>Moving Average |
| Schedule No | . 3  | Interest and Inflation Rates   |
| Schedule No | . 4  | Aa/AA Rated Electric Utilities Investment<br>Risk Characteristics  |
| Schedule No | . 5  | A/A Rated Electric Utility Ratio Summary   |
| Schedule No | . 6  | Gulf Power Company - Quality Measurements  |
| Schedule No | . 7  | DCF Model Equation   |
| Schedule No | . 8  | Two - Stage, Annually Compounded Discounted Cash Flow Wodel  |
| Schedule No | . 9  | Two - Stage, Annually Compounded Discounted Cash Flow Analysis for the Aa/AA Rated Electric Utility Index      |
| Schedule No | . 10 | Risk Premium Equation  |
| Schedule No | . 11 | Estimated Monthly Risk Premiums Aa/AA Electric Utility Index   |
| Schedule No | . 12 | Bond Yield Differential  |
| Schedule No | . 13 | Standard and Poor's Financial Benchmarks   |
| Schedule No | . 14 | Comparison - Overall Cost of Capital   |
| Schedule No | . 15 | Summary of Cost of Equity Analysis   |
|             |      |  |

## THE CONSUMER PRICE INDEX



### THE CONSUMER PRICE INDEX



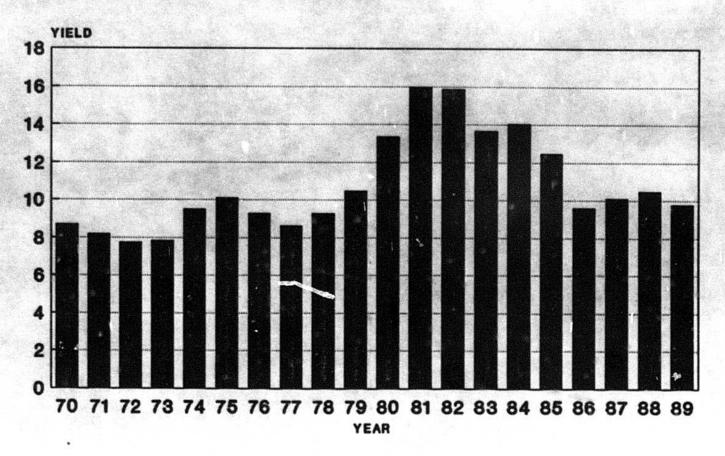
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#### CONSUMER PRICE INDEX

| XEAR  | ANNUAL<br>AVERAGE | FIVE YEAR<br>MOVING AVG. |
|-------|-------------------|--------------------------|
| 1990E | 4.4               | 3.8                      |
| 1989  | 4.8               | 3.6                      |
| 1988  | 4.1               | 3.5                      |
| 1987  | 3.7               | 3.4                      |
| 1986  | 1.9               | 3.9                      |
| 1985  | 3.6               | 5.6                      |
| 1984  | 4.4               | 7.5                      |
| 1983  | 3.2               | 8.9                      |
| 1982  | 6.2               | 9.8                      |
| 1981  | 10.4              | 9.9                      |
| 1980  | 13.5              | 8.9                      |
| 1979  | 11.3              | 8.1                      |
| 1978  | 7.6               | 8.0                      |
| 1977  | 6.5               | 7.7                      |
| 1976  | 5.8               | 7.0                      |
| 1975  | 9.1               | 6.7                      |
| 1974  | 10.8              | 6.1                      |
| 1973  | 6.2               |                          |
| 1972  | 3.3               |                          |
| 1971  | 4.3               |                          |
| 1970  | 5.9               |                          |

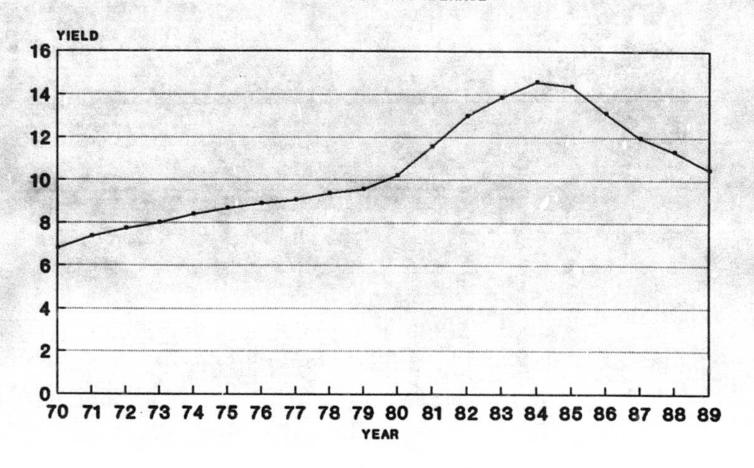
SOURCE: VALUE LINE

### AVERAGE YIELDS A - RATED UTILITY BONDS



A - BOND YIELDS

### AVERAGE YIELDS A - RATED UTILITY BONDS



- A - RATED BONDS

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#### AVERAGE YIELDS ON A-RATED PUBLIC UTILITY BONDS

| YEAR<br>1989 9.77%<br>1988 10.49% | MOVING AVG.<br>10.48%<br>11.33%<br>11.97% |
|-----------------------------------|---|
|                                   | 11.33%                                    |
| 1988 10.49%                       |   |
|                                   | 11 076                                    |
| 1987 10.10%                       | 11.9/6                                    |
| 1986 9.58%                        | 13.12%                                    |
| 1985 12.47%                       | 14.39%                                    |
| 1984 14.03%                       | 14.57%                                    |
| 1983 13.66%                       | 13.86%                                    |
| 1982 15.86%                       | 12.99%                                    |
| 1981 15.95%                       | 11.54%                                    |
| 1980 13.34%                       | 10.20%                                    |
| 1979 10.49%                       | 9.55%                                     |
| 1978 9.29%                        | 9.36%                                     |
| 1977 8.61%                        | 9.07%                                     |
| 1976 9.29%                        | 8.89%                                     |
| 1975 10.09%                       | 8.66%                                     |
| 1974 9.50%                        | 8.38%                                     |
| 1973 7.84%                        | 7.99%                                     |
| 1972 7.72%                        | 7.72%                                     |
| 1971 8.16%                        | 7.35%                                     |
| 1970 8.69%                        | 6.80%                                     |

SOURCE: MOODY'S BOND SURVEY

# INTEREST RATES

| Dow Jones Utility Average | Dow Jones Industrial Average | S&P 500 |                      |                          | GNP Deflator | Price Index | Consumer   |                    | Long Term<br>Treasury Yield | Commercial<br>Paper (30 day) | Prime Rate | Aaa Utility<br>Aa Utility<br>A Utility<br>Baa Utility |  |
|---------------------------|------------------------------|---------|----------------------|--------------------------|--------------|-------------|--|--------------------|-----------------------------|------------------------------|------------|---|--|
| Average                   | rial Average                 |         |                      |                          | 3.30%        | 3.70%       | 198776)  |                    | 8.70%                       | 6.70%                        | 8.10%      | 9.52%<br>9.77%<br>10.10%<br>10.53%                    | 1987(1)  |
|                           |                              |         |                      |                          | 3.40%        | 4.10%       | Annual Averages<br>1988(4)   |                    | •                           | 7.7729                       | 9.44%      | 10.05%<br>10.26%<br>10.49%<br>11.00%                  | Annual Averages<br>1988(1)   |
|                           |                              |         |                      | STOCKM                   | 4.20%        | 4.80%       | 198841   |                    | <b>8518</b>                 | 9.05%                        | 10.83%     | 9.32%<br>9.50%<br>9.77%                               |  |
| 188.28                    | 2168.57                      | 277.72  | 12/31/88             | STOCK MARKET PERFORMANCE | 3.20%        | 3.90%       | Latest<br>Actual(2)<br>3/29/90   | INFLATION PATES(3) | 8.73%                       | 8.32%                        | 10.00%     | 9.48%<br>9.60%<br>9.65%<br>10.06%                     | Average<br>March<br>1980(1)  |
| 235.04                    | 2753.2                       | 353.4   | 12/29/89             | RMANCE                   | 3.90%        | 4.10%       | Second<br>Quarter<br>1990/2)   | 0                  | 8.30%                       | 8.13%                        | 9.90%      | 8.70%   | Second<br>Quarter<br>1990/2  |
| 26.18%                    | 26.96%                       | 27.25%  | Percent              |                          | 3.90%        | 4.20%       | Third<br>Quarter<br>1990/2   |                    | 8.20%                       | 8.10%                        | 9.80%      | 9.50%   | Blue Chi<br>Third<br>Quarter<br>1990(2)                                |
| 206.05                    | 2654.50                      | 330.36  | 4/25/90              |                          | 4.10%        | 4.30%       | Blue Chip Forecast<br>Third Fourth<br>Quarter Quarter<br>1990/2 1990/2 |                    | 8.20%                       | 8.00%                        | 9.70%      | 9.50%   | Blue Chip Forecast<br>Third Fourth<br>Quarter Quarter<br>1990/2 1990/2 |
| -12.33%                   | -3.58%                       | -6.52%  | Percent<br>Change(5) |                          | 4.00%        | 4.30%       | First<br>Quarter<br>1990(2)  |                    | 8.20%                       | 8.00%                        | 9.70%      | 9.50%   | First<br>Quarter<br>1990(2)  |

<sup>(1)</sup> Moody's Bond Survey, 4/16/90
(2) Blue Chip Financial Forecasts, April 1, 1990
(3) % change from prior years
(4) Value Line, 4/20/90

<sup>(5)</sup> Not Annualized (6) Wall Street Journal, 4/25/90

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#### Aa/AA RATED ELECTRIC UTILITIES

|                 | SEP      | Safety | Line |     | S&P<br> Bond<br> Rating | <br> Equity<br> Ratio |
|-----------------|----------|--------|------|-----|-------------------------|-----------------------|
| Allegheny Power | A        | 1      | .70  | Aa3 | AA-                     | 47.0                  |
| Baltimore G & E | A        | 1      | .75  | Aa3 | AA-                     | 43.0                  |
| Consolidated Ed | A+       | 1      | .75  | Aal | AA                      | 54.0                  |
| Duke Power      | A        | 1      | .75  | Aa2 | AA-                     | 49.5                  |
| Iowa Ill G & E  | A        | 1      | - 60 | Aa2 | AA                      | 45.0                  |
| IPALCO          | A-       | 1      | .70  | Aa2 | -AA                     | 54.5                  |
| Kansas P & L    | A        | 1      | .70  | Aa3 | AA-                     | 49.0                  |
| Northern States | A        | 1      | .75  | Aal | AA                      | 49.5                  |
| Oklahoma G & E  | A-       | 1      | .65  | Aa2 | AA                      | 49.0                  |
| Orange&Rockland | _ A      | 1      | .70  | Aa2 | AA-                     | 43.5                  |
| South Cal Ed    | A        | 1      | .75  | Aa2 | AA                      | 45.5                  |
| Southwest P. S. | <b>A</b> | 1      | .75  | Aa2 | -AA                     | 49.5                  |
| TECO            | A        | 1      | .60  | Aa2 | AA                      | 53.54                 |
| Average         | A        | 1      | .70  | Aa2 | -AA                     | 48.74                 |

#### Sources:

Standard & Poor's Stock Guide, 4/90 Standard & Poor's Bond Guide, 4/90 Moody's Public Utility Manual, 1989 Value Line Ratings and Report, Ed.1 - 3/23/90, Ed.5 - 4/20/90,

and Ed. 11 - 3/2/90

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#### Aa/AA Rated Electric Utility Quality Measurements

|                   | Total Debt/<br>Total<br>Capital | Return<br>on<br>Equity | TIE<br>without<br>AFUDC | AFUDC<br>as a %<br>of<br>Net Income | Percentage<br>Internally<br>Generated<br>Funds |
|-------------------|---------------------------------|------------------------|-------------------------|-------------------------------------|--|
| Allegheny Power.  | 43.0%                           | 12.5%                  | 3.98X                   | 3.5%                                | 76.8%  |
| Baltimore G&E     | 46.3%                           | 12.0%                  | 3.29X                   | 12.5%                               | 56.7%  |
| Consolidated Ed.  | 38.6%                           | 12.5%                  | 4.82X                   | 3.0%                                | 89.1%  |
| Duke Power        | 40.98                           | 13.5%                  | 3.81X                   | 20.5%                               | 45.9%  |
| Iowa-Ill. G&E     | 50.3%                           | 13.0%                  | 4.17X                   | 5.0%                                | 83.0%  |
| IPALCO            | 47.48                           | 13.5%                  | 3.97X                   | 2.0%                                | 127.5%   |
| Kansas P&L        | 49.38                           | 11.5%                  | 3.28X                   | 1.0%                                | 50.0%  |
| Northern States   | 40.78                           | 13.5%                  | 4.38X                   | 4.0%                                | 64.0%  |
| Oklahoma G&E      | 49.98                           | 14.5%                  | 3.50X                   | 3.0%                                | 107.2%   |
| Orange & Rockland | 52.0%                           | 12.0%                  | 3.05X                   | 3.5%                                | 75.3%  |
| Southern Cal. Ed. | 53.8%                           | 14.5%                  | 2.88X                   | 2.0%                                | 84.8%  |
| Southwest P.S.    | 44.0%                           | 15.8%                  | 4.29X                   | 1.0%                                | 218.8%   |
| Tampa Electric    | 40.8%                           | 14.58                  | 4.16X                   | 2.5%                                | 94.0%  |
| Average           | 45.98                           | 13.33\$                | 3.81X                   | 4.88%                               | 90.24%   |
| Gulf Power        | 53.6%                           | 10.81%                 | 2.72X                   | (1.60%)                             | 105.10%  |

#### Source:

Value Line Ratings and Reports - Ed.1, 12/22/89, Ed. 5, 1/19/90, Ed. 11, 3/2/90 - for period ending 12/31/89.

Standard and Poor's Credit Review - 10/20/89 - for period ending

6/30/89.

Gulf Power MFRS

FPSC Surveillance Reports

#### A/A Rated Electric Utility Financial Ratio Summary

| C                | ommon Equity/<br>Total<br><u>Capital</u> | Total Debt/<br>Total<br>Capital | Pretax<br>Interest<br>Coverage** | Net Cash<br>Flow/<br>Capital<br>Spending |
|------------------|--|---------------------------------|----------------------------------|--|
| Appalachian Pwr. | 43.94                                    | 47.8%                           | 3.39X                            | 104.0%                                   |
| Carolina Pwr.    | 41.6%                                    | 51.7%                           | 3.07X                            | 112.7%                                   |
| Cen. La. Elec.   | 42.8%                                    | 53.5%                           | 2.75X                            | 88.0%                                    |
| Delmarva Power   | 41.9%                                    | 51.5%                           | 2.71X                            | 56.0%                                    |
| Emp. Distric El  | 50.0%                                    | 46.18                           | 3.53X                            | 59.5%                                    |
| Gen. Pub. Utils. | * 44.48                                  | 46.2%                           | 3.44X                            | 69.2%                                    |
| Idaho Power      | 47.48                                    | 47.8%                           | 2.93X                            | 107.4%                                   |
| Iowa P & L Co.   | 36.1%                                    | 61.6%                           | 3.14X                            | 79.0%                                    |
| Kan. City P&L    | 41.6%                                    | 53.5%                           | 2.64X                            | 154.8%                                   |
| Otter Tail Pwr.  | 51.9%                                    | 38.6%                           | 5.15X                            | 163.9%                                   |
| Pacificorp       | 43.3%                                    | 52.5%                           | 2.77X                            | 153.6%                                   |
| Pacific G&E      | 44.0%                                    | 48.8%                           | 2.63X                            | 76.3%                                    |
| Portland General | 43.0%                                    | 48.3%                           | 3.06X                            | 163.9%                                   |
| Puget Sound P&L  | 42.7%                                    | 49.1%                           | 2.79X                            | 112.4%                                   |
| South Car. E&G   | 44.1%                                    | 50.4%                           | 3.07X                            | 69.7%                                    |
| Union Electric   | 41.48                                    | 52.1%                           | 3.77X                            | 197.1%                                   |
| Va. El. Power    | 37.4%                                    | 52.8%                           | 2.59X                            | 66.9%                                    |
| Wash. Wtr. Pwr.  | 41.68                                    | 48.88                           | 3.00X                            | 123.0%                                   |
| Average          | 43.31                                    | 50.18                           | 3.14X                            | 108.7%                                   |
| Gulf Power       | 38.94%                                   | 53.6%                           | 2.72X                            | 105.1%                                   |

Standard & Poor's Credit Review, 10/20/89, period ending 6/30/89. Gulf Power MFRS - period ending 12/31/89. FPSC Surveillance Reports

<sup>\*</sup>Reflects combined operations of electric utility units. \*\*Without AFUDC.

#### GULF POWER COMPANY QUALITY MEASUREMENTS

| 10.00   | 1985   | 1986   | 1987   | 1988    | 1989      |
|---|--------|--------|--------|---------|-----------|
| Overall Earned<br>Rate of Return                  | 9.83%  | 9.62%  | 8.74%  | 8.46%   | 7.59%     |
| Return<br>on Equity                               | 15.27% | 15.07% | 13.80% | 13.64%  | 10.89%    |
| Times<br>Interest Earned<br>with AFUDC            | 3.20X  | 3.26X  | 2.98X  | 2.98X   | 2.70X     |
| Times<br>Interest Earned<br>without AFUDC         | 2.85X  | 2.86X  | 2.93X  | 2.95X   | 2.72X     |
| Percentage<br>AFUDC/Net Income                    | 23.77% | 26.33% | 3.75%  | 2.00%   | (1.60%)** |
| Percentage<br>Internally<br>Generated Funds       | 71.52% | 83.07% | 98.49% | 22.00%* | 105.10%   |
| Percentage<br>Long-Term Debt/<br>Investor Capital | 52.77% | 52.54% | 51.24% | 50.54%  | 50.30%    |

Source: FPSC Monthly Surveillance Reports

<sup>\*</sup> Excluding the one time effect of the buyout of the Peabody coal contracts the number is 110%.
\*\*Reflects FERC decision relating to reversal of previously

accrued AFUDC.

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#### DCF MODEL EQUATION

(1) Po = 
$$D_1$$
 +  $D_2$  +  $D_3$  + ... +  $D^{00}$ 

$$(1+K) (1+K)^2 (1+K)^3 (1+K)^{00}$$

Where: Dt = Dividend paid at the end of period t

K = Investor's required rate of return (the market cost of equity)

Po = The current price of the stock

Assuming a constant growth in dividends and g K, Equation (1) can be rewritten as:

(2) Po = 
$$\frac{D_1 + D_1(1+g)^1 + D_1(1+g)^2 + ... + D_1(1+g)^{n-1}}{(1+K)^{\frac{n-1}{2}}}$$

Which can be reduced to:

$$P_0 = D_1$$

$$K-g$$

Which, after rearranging terms, results in the familiar infinite horizon, constant growth, annual DCF model:

(4) 
$$K = \frac{D_1}{P_0} + q$$

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#### TWO-STAGE, ANNUALLY COMPOUNDED DCF MODEL

(5) 
$$P_0 = \sum_{t=1}^{n} \frac{D_t}{(1+K)^{\frac{t}{t}}} + \left(\frac{D_n(1+g_n)}{K-g_n}\right) \left(\frac{1}{(1+K)}\right)^n$$

Where:

Po = The current stock price

Dt = The dividends expected during the period of non-constant growth

K = Investor's required rate of return
 (the market cost of equity)

n = The years of non-constant growth

Dn = The dividend expected in year n

gn = The constant rate of growth expected after year n

#### ISSUANCE COSTS ADJUSTMENT

Where:

(6) 
$$P_0(1-FC) = \sum_{t=1}^{n} \frac{D_t}{(1+K)^t} + \left(\frac{D_n(1+g_n)}{K-g_n}\right) \left(\frac{1}{(1+k)}\right)^n$$

FC = Flotation Costs

#### Two-Stage, Annually Compounded Discounted Cash Flow Analysis

|                 |        |        |        |        | EXPE | CTED  | EXPECTED DIVIDEND | AVERAGE<br>STOCK |
|-----------------|--------|--------|--------|--------|------|-------|-------------------|------------------|
|                 | ***EXI | PECTED | DIVIDE | NDS*** | EPS  | ROE   | GROWTH            | PRICE            |
| COMPANY         | 1990   | 1991   | 1992   | 1993   | 1993 | 1993  | 1993+             | MAR 90           |
| ALLEGHENY POWER |        | 3.30   | 3.40   | 3.50   | 4.60 | 13.50 | 1.0323            | 39.9375          |
| BALTIMORE G&E   | 2.18   | 2.33   | 2.48   | 2.65   | 3.90 | 13.50 | 1.0433            | 30.6250          |
| CONS. EDISON    | 1.82   | 1.91   | 2.00   | 2.10   | 2.90 | 13.50 | 1.0372            | 26.0625          |
| DUKE POWER      | 3.20   | 3.38   | 3.56   | 3.76   | 5.85 | 13.00 | 1.0464            | 53.8750          |
| IOWA ILL. G&E   | 3.34   | 3.39   | 3.45   | 3.50   | 4.50 | 12.50 | 1.0278            | 43.6250          |
| IPALCO          | 1.80   | 1.88   | 1.96   | 2.05   | 2.75 | 12.50 | 1.0318            | 24.8750          |
| KANSAS P&L      | 1.80   | 1.85   | 1.90   | 1.95   | 2.75 | 13.50 | 1.0393            | 22.6250          |
| NORTHERN STS.   | 2.28   | 2.38   | 2.49   | 2.60   | 3.75 | 13.50 | 1.0414            | 36.6250          |
| OKLAHOMA G&E    | 2.51   | 2.60   | 2.70   | 2.80   | 3.50 | 15.00 | 1.0300            | 36.1875          |
| ORANGE & ROCK   | 2.35   | 2.45   | 2.55   | 2.65   | 3.80 | 13.00 | 1.0393            | 30.6250          |
| SCE             | 2.62   | 2.73   | 2.84   | 2.95   | 4.15 | 14.00 | 1.0405            | 38.2500          |
| SOUTHWEST P.S.  | 2.20   | 2.28   | 2.36   | 2.45   | 2.75 | 15.00 | 1.0164            | 29.5000          |
| TECO            | 1.61   | 1.70   | 1.80   | 1.90   | 2.80 | 14.50 | 1.0466            | 28.8125          |
| Average         |        |        |        |        |      |       |                   |                  |
| Dividend        | 2.38   | 2.48   | 2.58   | 2.68   | 3.69 | 13.62 | 1.0363            | 33.9712          |

The cost of equity is calculated using a Two-Stage, Annually Compounded Discounted Cash Flow Model:

$$P_0 * (1-fc) = \sum_{t=1}^{n} D_t/(1+k)^t + (D_n*(1+g_n)/(k-g_n) * (1/(1+k))^n$$

Solving the above equation for k using: Po = \$33.97, fc = 3%, and

Provides a cost of common equity of: 11.00%

1. Data obtained or calculated from information provided in Value Line Ratings and Reports, Ed. 1, 3/23/90, Ed. 5, 4/20/90, and Ed. 11, 3/2/90.

2. The average stock price is the average of the high and low stock price

for March 1990, S&P Stock Guide, April 1990.

#### RISK PREMIUM COST OF EQUITY

Ke = Risk Premium + Expected Risk-Free Rate + Bond Yield Differential

 $K_e = 3.191 + 8.260$ 

 $K_e = 11.50$  (Rounded)

#### Note

 The expected risk-free rate is the forecasted long-term treasury yield obtained from "Blue Chip Financial Forecast", April 1, 1990.

#### ESTIMATED MONTHLY RISK PREMIUMS AA/AA ELECTRIC UTILITY INDEX MAY 1980 - APRIL 1990

|      |       | Cost of<br>Equity | Risk<br>Froo | Rink    |  |
|------|-------|-------------------|--------------|---------|--|
| YEAR | MONTH | Electric          | Rate         | Premium |  |
| 1980 | MAY   | 16.686            | 11.220       | 5.466   |  |
|      | JUN   | 15.912            | 10.150       | 5.762   |  |
|      | JUL   | 15.475            | 9.740        | 5.735   |  |
|      | AUG   | 15.735            | 10.200       | 5.535   |  |
|      | SEP   | 16.375            | 10.940       | 5.435   |  |
|      | OCT   | 16.314            | 11.360       | 4.954   |  |
|      | NOV   | 16.923            | 11.630       | 5.293   |  |
|      | DEC   | 17.492            | 12.300       | 5.192   |  |
| 1981 | JAN   | 17.354            | 12.350       | 5.004   |  |
|      | FEB   | 17.180            | 12.050       | 5.130   |  |
|      | MAR   | 17.805            | 12.680       | 5.125   |  |
|      | APR   | 17.572            | 12.590       | 4.982   |  |
|      | MAY   | 17.630            | 13.080       | 4.550   |  |
|      | JUN   | 17.793            | 13.440       | 4.353   |  |
|      | JUL   | 16.890            | 12.820       | 4.070   |  |
|      | AUG   | 17.095            | 13.490       | 3.605   |  |
|      | SEP   | 16.845            | 14.050       | 2.795   |  |
|      | OCT   | 17.280            | 14.590       | 2.690   |  |
|      | NOV   | 17.220            | 14.590       | 2.630   |  |
|      | DEC   | 16.513            | 13.080       | 3.433   |  |
| 1982 | JAN   | 16.450            | 13.280       | 3.170   |  |
|      | FEB   | 16.750            | 14.160       | 2.590   |  |
|      | MAR   | 16.546            | 14.070       | 2.476   |  |
|      | APR   | 15.817            | 13.370       | 2.447   |  |
|      | MAY   | 15.627            | 13.240       | 2.387   |  |
|      | JUN   | 15.650            | 13.050       | 2.600   |  |
|      | JUL   | 16.030            | 13.750       | 2.280   |  |
|      | AUG   | 16.263            | 13.400       | 2.863   |  |
|      | SEP   | 15.865            | 12.540       | 3.325   |  |
|      | OCT   | 15.302            | 11.860       | 3.442   |  |
|      | NOV   | 15.058            | 10.840       | 4.218   |  |
|      | DEC   | 15.354            | 10.460       | 4.894   |  |
| 1983 | JAN   | 15.584            | 10.600       | 4.984   |  |
|      | FEB   | 15.287            | 10.640       | 4.647   |  |
|      | MAR   | 15.350            | 10.890       | 4.460   |  |
|      | APR   | 14.880            | 10.650       | 4.230   |  |
|      | MAY   | 14.946            | 10.490       | 4.456   |  |
|      | JUN   | 14.860            | 10.520       | 4.340   |  |
|      | JUL   | 14.846            | 10.950       | 3.896   |  |
|      | AUG   | 15.080            | 11.440       | 3.640   |  |
|      | SEP   | 15.133            | 11.780       | 3.353   |  |

#### **ESTIMATED MONTHLY RISK PREMIUMS**

|      |       | Cost of  | Risk   |         |
|------|-------|----------|--------|---------|
|      |       | Equity   | Free   | Risk    |
| YEAR | MONTH | Electric | Rate   | Premium |
|      | OCT   | 14.723   | 11.620 | 3.103   |
|      | NOV   | 14.230   | 11.550 | 2.680   |
|      | DEC   | 13.970   | 11.680 | 2.290   |
| 1984 | JAN   | 14.220   | 11.810 | 2.410   |
|      | FEB   | 14.385   | 11.650 | 2.735   |
|      | MAR   | 14.764   | 11.810 | 2.954   |
|      | APR   | 14.860   | 12.280 | 2 580   |
|      | MAY   | 14.970   | 12.580 | 2.390   |
|      | JUN   | 15.048   | 13.320 | 1.728   |
|      | JUL   | 15.330   | 13.430 | 1.900   |
|      | AUG   | 15.198   | 13.240 | 1.958   |
|      | SEP   | 14.895   | 12.630 | 2.265   |
|      | OCT   | 14.490   | 12.340 | 2.150   |
|      | NOV   | 14.027   | 12.000 | 2.027   |
|      | DEC   | 14.058   | 11.550 | 2.508   |
| 1985 | JAN   | 13.984   | 11.510 | 2.474   |
|      | FEB   | 13.898   | 11.460 | 2.438   |
|      | MAR   | 14.050   | 11.560 | 2.490   |
|      | APR   | 13.902   | 11.920 | 1.982   |
|      | MAY   | 13.522   | 11.550 | 1.972   |
|      | JUN   | 13.360   | 11.080 | 2.280   |
|      | JUL   | 13.056   | 10.480 | 2.576   |
|      | AUG   | 13.340   | 10.620 | 2.720   |
|      | SEP   | 13.836   | 10.700 | 3.136   |
|      | OCT   | 13.832   | 10.780 | 3.052   |
|      | NOV   | 13.784   | 10.660 | 3.124   |
|      | DEC   | 13.484   | 10.190 | 3.294   |
| 1986 | JAN   | 12.926   | 9.680  | 3.246   |
|      | FEB   | 12.810   | 9.590  | 3.220   |
|      | MAR   | 12.405   | 9.260  | 3.145   |
|      | APR   | 11.934   | 8.150  | 3.784   |
|      | MAY   | 11.975   | 7.580  | 4.395   |
|      | JUN   | 11.877   | 8.130  | 3.747   |
|      | JUL   | 11.632   | 8.270  | 3.362   |
|      | AUG   | 11.036   | 7.880  | 3.156   |
|      | SEP   | 10.683   | 7.740  | 2.943   |
|      | OCT   | 10.998   | 8.100  | 2.898   |
|      | NOV   | 11.094   | 8.060  | 3.034   |
|      | DEC   | 10.968   | 7.820  | 3.148   |
| 1987 | JAN   | 10.731   | 7.660  | 3.071   |
|      | FEB   | 10.649   | 7.620  | 3.029   |
|      | MAR   | 10.798   | 7.710  | 3.088   |
|      | APR   | 11.000   | 7.640  | 3.360   |
|      | MAY   | 11.652   | 8.350  | 3.302   |
|      | JUN   | 11.668   | 8.850  | 2.818   |

#### **ESTIMATED MONTHLY RISK PREMIUMS**

|           |       | Cost of Equity | Risk<br>Free | Rink    |  |
|-----------|-------|----------------|--------------|---------|--|
| YEAR      | MONTH | Electric       | Rato         | Premium |  |
| TIME.     | JUL   | 11.378         | 3,570        | 2.708   |  |
|           | AUG   | 11.515         | 8.770        | 2.745   |  |
|           | SEP   | 11.453         | 9.060        | 2.393   |  |
|           | OCT   | 11.477         | 9.670        | 1.807   |  |
|           | NOV   | 11.925         | 9.730        | 2.195   |  |
|           | DBC   | 11.787         | 9.100        | 2.687   |  |
| 1988      | JAN   | 12.000         | 9.230        | 2.770   |  |
|           | FEB   | 11.692         | 8,930        | 2.762   |  |
|           | MAR   | 11.435         | 8,480        | 2.955   |  |
|           | APR   | 11.632         | 8,640        | 2.992   |  |
|           | MAY   | 11,918         | 8,970        | 2.948   |  |
|           | JUN   | 11.932         | 9.300        | 2.632   |  |
|           | JUL   | 11.486         | 9.110        | 2.376   |  |
|           | AUG   | 11.774         | 9.280        | 2.494   |  |
|           | SEP   | 11.907         | 9.420        | 2.487   |  |
|           | OCT   | 11.820         | 9.140        | 2.680   |  |
|           | NOV   | 11.690         | 8.960        | 2.730   |  |
|           | DEC   | 11.790         | 9.090        | 2.700   |  |
| 1989      | JAN   | 11.710         | 9.100        | 2.610   |  |
|           | FEB   | 11.785         | 9.050        | 2.735   |  |
|           | MAR   | 11.964         | 9.150        | 2.814   |  |
|           | APR   | 11.822         | 9.310        | 2.512   |  |
|           | MAY   | 11.792         | 9.170        | 2.622   |  |
|           | JUNE  | 11.572         | 8.930        | 2.642   |  |
|           | JUL   | 11.150         | 8.370        | 2.780   |  |
| ALBERT ST | AUG   | 11.038         | 8.160        | 2.878   |  |
|           | SEPT  | 11.003         | 8.230        | 2.773   |  |
|           | OCT   | 11.118         | 8.290        | 2.828   |  |
|           | NOV   | 11.255         | 8.120        | 3.135   |  |
|           | DEC   | 11.036         | 8.000        | 3.036   |  |
| 1990      | JAN   | 10.696         | 8.000        | 2.696   |  |
|           | FEB   | 10.936         | 8.370        | 2.566   |  |
|           | MAR   | 11.162         | 8.630        | 2.532   |  |
|           | APR   | 11.043         | 8.730        | 2.313   |  |

AVERAGE

3.191

BOND YIELD DIFFERENTIALS

Moody's Bond Survey/Public Utility Bond Yield Averages

| YEAR  | HTHOM      | As2   | SPREAD | 4     | SPREAD | AI    | SPREAD | A2    | SPREAD | A     | SPREAD | Basi  | SPREAD | Bus2  |
|-------|------------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|
|       | MAR        | 9.60  | 80.0   | 9.68  | 0.08   | 9.77  | 0.08   | 9.85  | 0.07   | 9.92  | 0.07   | 9.99  | 0.07   | 10.06 |
|       | FEB        | 9.57  | 0.06   | 9.63  | 0.06   | 9.70  | 0.06   | 9.76  | 0.07   | 9.83  | 0.07   | 9.89  | 0.07   | 9.96  |
| 1990  | JAN        | 9.39  | 0.06   | 9.45  | 0.06   | 9.50  | 0.06   | 9.56  | 0.06   | 9.62  | 0.06   | 9.68  | 0.06   | 9.74  |
|       | DEC        | 9.26  | 0.06   | 9.32  | 0.06   | 9.38  | 0.06   | 9.44  | 0.05   | 9.49  | 0.05   | 9.55  | 0.05   | 9.60  |
|       | NOV        | 9.25  | 0.09   | 9.34  | 0.09   | 9.42  | 0.09   | 9.51  | 0.04   | 9.55  | 0.04   | 9.60  | 0.04   | 9,64  |
|       | OCT        | 9.28  | 0.09   | 9.37  | 0.09   | 9.45  | 0.09   | 9.54  | 0.03   | 9.57  | 0.03   | 9.61  | 0.03   | 9,64  |
|       | SEP        | 9.35  | 0.08   | 9.43  | 80.0   | 9.50  | 0.08   | 9.58  | 0.04   | 9.62  | 0.04   | 9.66  | 0.04   | 9.70  |
|       | AUG        | 9.27  | 0.08   | 9.35  | 0.06   | 9.44  | 0.06   | 9.52  | 0.04   | 9.56  | 0.04   | 9.60  | 0.04   | 9.64  |
|       | JUL        | 9.23  | 0.00   | 9.32  | 0.09   | 9.41  | 0.09   | 9.50  | 0.05   | 9.55  | 0.05   | 9.59  | 0.05   | 9.64  |
|       | JUN        | 9.37  | 0.09   | 9.46  | 0.09   | 9.55  | 0.09   | 9.64  | 0.05   | 9.69  | 0.05   | 9.75  | 0.05   | 9.80  |
|       | MAY        | 9.79  | 0.07   | 9.86  | 0.07   | 9.92  | 0.07   | 9.99  | 0.10   | 10.09 | 0.10   | 10.19 | 0.10   | 10.29 |
|       | APR        | 10.02 | 0.05   | 10.07 | 0.05   | 10.13 | 0.05   | 10.18 | 0.10   | 10.28 | 0.10   | 10.39 | 0.10   | 10.49 |
|       | MAR        | 10.05 | 0.06   | 10.11 | 0.06   | 10.17 | 0.06   | 10.23 | 0.09   | 10.32 | 0.02   | 10.41 | 0.09   | 10.50 |
|       | FEB        | 9.93  | 0.05   | 9.98  | 0.05   | 10.02 | 0.05   | 10.07 | 0.10   | 10.17 | 0.10   | 10.28 | 0.10   | 10.38 |
|       |            |       | 0.06   | 9.95  | 0.06   | 10.02 | 0.06   | 10.08 | 0.10   | 10.18 | 0.10   | 10.28 | 0.10   | 10.34 |
| 989   | JAN        | 9.89  |        |       |        |       | 0.05   | 10.06 | 0.13   | 10.19 | 0.13   | 10.31 | 0.13   | 10.44 |
|       | DEC        | 9.90  | 0.05   | 9.95  | 0.05   | 10.01 |        |       | 0.11   |       | 0.11   | 10.20 | 0.11   | 10.31 |
|       | NOV        | 9.79  | 0.06   | 9.85  | 0.06   | 9.91  | 0.06   | 9.97  |        | 10.06 |        | 10.20 | 0.15   | 10.35 |
|       | ост        | 9.80  | 0.03   | 9.83  | 0.03   | 9.87  | 0.03   | 9.90  | 0.15   | 10.05 | 0.15   |       |        |       |
|       | SEP        | 10.34 | 0.09   | 10.43 | 0.09   | 10.52 | 0.09   | 10.61 | 0.17   | 10.78 | 0.17   | 10.96 | 0.17   | 11.13 |
|       | AUO        | 10.85 | 0.11   | 10.96 | 0.11   | 11.06 | 0.11   | 11.17 | 0.17   | 11.34 | 0.17   | 11.52 | 0.17   | 11.69 |
|       | JUL        | 10.76 | 0.09   | 10.85 | 0.09   | 10.95 | 0.09   | 11.04 | 0.16   | 11.20 | 0.16   | 11.36 | 0.16   | 11.52 |
|       | JUN        | 10.52 | 0.09   | 10.61 | 0.09   | 10.70 | 0.09   | 10.79 | 0.16   | 10.95 | 0.16   | 11.11 | 0.16   | 11.27 |
|       | MAY        | 10.53 | 0.09   | 10.62 | 0.09   | 10.72 | 0.09   | 10.81 | 0.19   | 11.00 | 0.19   | 11.19 | 0.19   | 11.34 |
|       | APR        | 10.29 | 0.08   | 10.37 | 0.08   | 10.46 | 0.08   | 10.54 | 0.23   | 10.77 | 0.23   | 11.00 | 0.23   | 11.23 |
|       | MAR        | 9.92  | 0.06   | 9.98  | 0.06   | 10.03 | 0.06   | 10.09 | 0.20   | 10.29 | 0.20   | 10.49 | 0.20   | 10.69 |
|       | FEB        | 9.91  | 0.06   | 9.97  | 0.06   | 10.04 | 0.06   | 10.10 | 0.18   | 10.28 | 0.18   | 10.47 | 0.12   | 10.65 |
| 1988  | JAN        | 10.52 | 0.06   | 10.60 | 0.08   | 10.68 | 80.0   | 10.76 | 0.19   | 10.95 | 0.19   | 11.15 | 0.19   | 11.34 |
|       | DEC        | 10.78 | 0.07   | 10.85 | 0.07   | 10.91 | 0.07   | 10.98 | 0.19   | 11.17 | 0.19   | 11.36 | 0.19   | 11.55 |
|       | NOV        | 10.62 | 0.07   | 10.69 | 0.07   | 10.75 | 0.07   | 10.82 | 0.19   | 11.01 | 0.19   | 11.21 | 0.19   | 11.40 |
|       | OCT        | 11.11 | 0.08   | 11.19 | 0.08   | 11.26 | 80.0   | 11.34 | 0.19   | 11.53 | 0.19   | 11.72 | 0.19   | 11.91 |
|       | SEP        | 10.66 | 0.19   | 10.85 | 0.19   | 11.03 | 0.19   | 11.22 | 0.12   | 11.34 | 0.12   | 11.46 | 0.12   | 11.50 |
|       | AUG        | 10.05 | 0.13   | 10.18 | 0.13   | 10.32 | 0.13   | 10.45 | 0.15   | 10.60 | 0.15   | 10.75 | 0.15   | 10.90 |
|       | JUL        | 9.70  | 0.15   | 9.85  | 0.15   | 10.00 | 0.15   | 10.15 | 0.16   | 10.31 | 0.16   | 10.46 | 0.16   | 10.63 |
|       | JUN        | 9.61  | 0.14   | 9.75  | 0.14   | 9.88  | 0.14   | 10.02 | 0.15   | 10.17 | 0.15   | 10.31 | 0.15   | 10.40 |
|       | MAY        | 9.63  | 0.09   | 9.72  | 0.09   | 9.82  | 0.09   | 9.91  | 0.16   | 10.07 | 0.16   | 10.24 | 0.16   | 10.40 |
|       | APR        | 9.15  | 0.08   | 9.23  | 80.0   | 9.30  | 30.0   | 9.38  | 0.16   | 9.54  | 0.16   | 9.69  | 0.16   | 9.8   |
|       | MAR        | 8.64  | 0.10   | 8.74  | 0.10   | 8.83  | 0.10   | 1.93  | 0.09   | 9.02  | 0.09   | 9.10  | 0.09   | 9.15  |
|       | FEB        | 8.69  | 0.10   | 8.79  | 0.10   | 8.90  | 0.10   | 9.00  | 0.08   | 9.08  | .0.08  | 9.16  | 0.08   | 9.24  |
| 1987  | JAN        | 8.62  | 0.11   | 8.73  | 0.11   | 8.84  | 0.11   | 8.95  | 0.11   | 9.06  | 0.11   | 9.16  | 0.11   | 9.2   |
|       | DEC        | 8.81  | 0.10   | 8.91  | 0.10   | 9.02  | 0.10   | 9.12  | 0.12   | 9.24  | 0.12   | 9.37  | 0.12   | 9.4   |
|       | NOV        | 9.01  | 0.09   | 9.10  | 0.09   | 9.19  | 0.09   | 9.28  | 0.14   | 9.42  | 0.14   | 9.55  | 0.14   | 9.66  |
|       | OCT        | 9.24  | 0.09   | 9.33  | 0.09   | 9.43  | 0.09   | 9.52  | 0.14   | 9.66  | 0.14   | 9.81  | 0.14   | 9.9   |
|       | SEP        | 9.28  | 0.08   | 9.36  | C.08   | 9.44  | 0.08   | 9.52  | 0.15   | 9.67  | 0.15   | 9.81  | 0.15   | 9.9   |
|       | AUG        | 9.03  | 0.09   | 9.12  | 0.09   | 9.20  | 0.09   | 9.29  | 0.14   | 9.43  | 0.14   | 9.56  | 0.14   | 9.7   |
|       | JUL        | 9.05  | 0.11   | 9.16  | 0.11   | 9.26  | 0.11   | 9.37  | 0.11   | 9.48  | 0.11   | 9.58  | 0.11   | 9.6   |
|       | JUN        | 9.36  | 0.09   | 9.45  | 0.09   | 9.53  | 0.09   | 9.62  | 0.14   | 9.76  | 0.14   | 9.89  | 0.14   | 10.0  |
|       | MAY        | 9.38  | 0.07   | 9.45  | 0.07   | 9.52  | 0.07   | 9.59  | 0.14   | 9.73  | 0.14   | 9.88  | 0.14   | 10.0  |
|       | APR        | 8.87  | 0.09   | 8.96  | 0.09   | 9.05  | 0.09   | 9.14  | 0.16   | 9.30  | 0.16   | 9.47  | 0.16   | 9.6   |
|       | MAR        | 9.16  | 0.11   | 9.27  | 0.11   | 9.37  | 0.11   | 9.48  | 0.14   | 9.62  | 0.14   | 9.77  | 0.14   | 9.9   |
|       | FEB        | 9.98  | 0.09   | 10.07 | 0.09   | 10.17 | 0.09   | 10.26 | 0.16   | 10.42 | 0.16   | 10.58 | 0.16   | 10.7  |
| 1986  | 33.37.27.2 | 10,44 | 0.12   | 10.56 | 0.12   | 10.67 | 0.12   | 10.79 | 0.15   | 10.94 | 0.15   | 11.09 | 0.15   | 11.2  |
|       | DEC        | 10.57 | 0.13   | 10.70 | 0.13   | 10.84 |        | 10.97 | 0.17   | 11.14 | 0.17   | 11.31 |        | 11.4  |
|       | NOV        | 11.10 |        | 11.23 | 0.13   | 11.36 |        | 11.49 |        | 11.67 | 0.18   | 11.86 |        | 12.0  |
|       | OCT        | 11.61 | 0.13   | 11.74 | 0.13   | 11.88 |        | 12.01 |        | 12.18 |        | 12.35 |        | 12.5  |
|       | SEP        | 11.68 |        | 11.83 | 0.15   | 11.98 |        | 12.13 |        | 12.33 |        | 12.52 |        | 12.7  |
|       | AUG        | 11.65 |        | 11.81 | 0.16   | 11.97 |        | 12.13 |        | 12.33 |        | 12.53 |        | 12.7  |
|       | JUL        | 11.55 |        | 11.72 | 0.17   | 11.90 |        | 12.07 |        | 12.26 |        | 12.49 |        | 12.7  |
|       | JUN        | 11.66 |        | 11.83 |        | 11.98 |        | 12.13 |        | 12.31 |        | 12.48 |        | 12.6  |
|       | MAY        | 12.65 |        | 12.81 | 0.16   | 12.96 |        | 13.12 |        | 13.29 |        | 13.45 |        | 13.6  |
| 1005  | APR        | 13.17 |        | 13.32 |        | 13.46 |        | 13.61 |        | 13.78 |        | 13.94 |        | 14.1  |
| .,,,, | ~~         |       |        |       |        |       | -      |       |        |       |        |       | 0.00   | 0.000 |
|       |            |       | SPREAD |       | CROSAD |       | -      |       | SPREAD | 43    | EPPEAD | Best  | SPREAD | Bee   |
|       |            |       |        |       |        |       |        |       |        |       |        |       |        |       |

#### Standard & Poor's Financial Benchmarks

#### Financial Benchmarks for Electric Utility Senior Debt Ratings

|                                     | AAA       | <b>A</b>  | <b>.</b> . <b>.</b> | BBB       |
|-------------------------------------|-----------|-----------|---------------------|-----------|
| Total Debt/<br>Permanent Capital    | Less than | 398 - 468 | 44% - 52%           | 50% - 58% |
| Pretax Interest<br>Coverage - Cash  | More than | 3.5X - 5X | 2.5X - 4X           | 1.5X - 3X |
| Net Cash Flow/<br>Permanent Capital | More than | 78 - 118  | 5% - 8%             | 2.5% - 6% |

Source: Standard & Poor's Utility Ratings Update, September 30,1988

# Comparison of Guif Power Company's Overall Cost of Capital and Tie Ratio for Given Equity Ratios and Cost Rates

# 39.89% Equity (1), 12.10% Allowed Return on Equity

## Gulf Power Company Test Year Ended 12/31/90

| 3.00     | TIE Ratio | 1311   |         |             |                             |
|----------|-----------|--------|---------|-------------|-----------------------------|
| 11.01%   | 8.24%     |        | 100.00% | \$1,189,615 |                             |
| 0.00%    | 0.00%     | 0.00%  | 17.13%  | \$203,823   | Deferred Taxes              |
| 0.65%    | 0.40%     | 10.00% | 4.04%   | \$48,068    | Inv.Tax Credits - Wtd. Cost |
| 0.00%    | 0.00%     | 0.00%  | 0.07%   | \$858       | Inv.Tax Credits - Zero Cost |
| 0.10%    | 0.10%     | 7.65%  | 1.33%   | \$15,775    | Customer Deposits           |
| 0.70%    | 0.44%     | 7.75%  | 5.67%   | \$67,432    | Preferred Stock             |
| 5.99%    | 3.74%     | 12.10% | 30.88%  | \$367,404   | Common Equity               |
| 3.53%    | 3.53%     | 8.72%  | 40.50%  | \$481,823   | Long-Term Debt              |
| 0.03%    | 0.03%     | 8.00%  | 0.37%   | \$4,432     | Short-Term Debt             |
| Cost     | Cost      | Com    | Total   | Per Books   |                             |
| Weighted | Weighted  |        | % 04    | Total       |                             |
| Pre-Tax  |           |        |         | Company     |                             |
|          |           |        |         |             |                             |

# 43.28% Equity (1), 11.65% Allowed Return on Equity

## Gulf Power Company Test Year Ended 12/31/90

|   |         | Deferred Taxes \$2 | OST    | ost   |        |        |        |        |        |       |          | 8       |  |
|---|---------|--------------------|--------|-------|--------|--------|--------|--------|--------|-------|----------|---------|--|
|   | 89,615  | 03.823             | 48,068 | \$858 | 15,775 | 61,345 | 98,648 | 31,439 | 29,659 | Books | Total    | mpany   |  |
|   | 100.00% | 17.13%             | 4.04%  | 0.07% | 1.33%  | 5.16%  | 33.51% | 36.27% | 2.49%  | Total | * 01     |         |  |
| - |         | 0.00%              | 9.96%  | 0.00% | 7.65%  | 7.75%  | 11.65% | 8.72%  | 8.00%  | 200   |          |         |  |
|   | 8.17%   | 0.00%              | 0.40%  | 0.00% | 0.10%  | 0.40%  | 3.90%  | 3.16%  | 0.20%  | Cont  | Weighted |         |  |
| , | 11.01%  | 0.00%              | 0.65%  | 0.00% | 0.10%  | 0.64%  | 6.26%  | 3.16%  | 0.20%  | Cost  | Weighted | Pre-Tax |  |

#### Summary of Cost of Equity Analysis

|   | DCF<br>Analysis | Risk<br>Premium<br>Analysis |
|---|-----------------|-----------------------------|
| Cost of Equity<br>for<br>AA Electric Utility<br>Index                                     | 11.00%          | 11.50%                      |
| Risk Adjustment -<br>Bond Yield Differential<br>to Move to an A rated<br>Electric Utility | .30%            | .30%                        |
| Cost of Equity<br>for<br>A Rated Electric<br>Utility                                      | 11.30%          | 11.80%                      |
| Recommended return on<br>Common Equity for<br>Gulf Power Company                          | 12              | .10%                        |

#### BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition of Gulf Power Company) DOCKET NO. 891345-EI for an increase in its rates and charges.

#### CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the Direct Testimony of Scott Seery has been served by First Class U. S. Mail, postage prepaid, on Edison Holland, Jr., Esquire (Gulf Power Company), Beggs and Lane, Post Office Box 12950, Pensacola, Florida 32576, with copies to the following parties of record, this 27 day of Q

Federal Executive Agencies (FEA) Gary A. Enders, USAF HQ USAF/ULT Stop 21 Tyndall, AFB FL 32403-6001

Office of Public Counsel Attn: Jack Shreve, Esquire 111 West Madison Street Suite 801 Tallahassee, FL 32399-1400

Joseph A. McGlothlin, Esquire Lawson, McWhirter, Grandoff & Reeves 522 East Park Avenue, Ste. 200 Tallahassee, Florida 32301

> SUZANNE BROWNLESS Staff Counsel

FLORIDA PUBLIC SERVICE COMMISSION 101 East Gaines Street Fletcher Building - Room 226 Tallahassee, Florida 32399-0863 (904) 487-2740

(6762L)SBr:bmi