ORIGINAL

# BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 010949-EI

OF

C. A. BENORE



A SOUTHERN COMPANY

1 1245 SEP 10 5

FPSC-COMMISSION CLERK

7		GULF POWER COMPANY		
2		Before the Florida Public Service Commission Prepared Direct Testimony of Charles A. Benore		
_	Docket No. 010949-EI			
4		Date of Filing: September 10, 2001		
5	Q.	Please state your name and business address.		
6	Α.	My name is Charles A. Benore, President, Benore Financial Consulting,		
7		Inc., 125 West Street, Bar Harbor, Maine 04609.		
8				
9	Q.	Please describe the financial consulting services of Benore Financial		
10		Consulting, Inc. (BFC).		
11	A.	BFC provides testimony and advisory consulting services to utility		
12		companies. As a result of my three decades of experience as a utility		
13		analyst and investment advisor, I am knowledgeable about investor		
14		attitudes and requirements, and the ability of utility companies to attract		
15		capital.		
16				
17	Q.	Please describe your educational background.		
18	A.	I am a graduate of Ohio University with a Bachelor of Science degree in		
19		finance, and of The Ohio State University with a Master of Arts degree in		
20		economics. I was elected to Phi Kappa Phi and Beta Gamma Sigma		
21		honorary societies.		
22				
23	Q.	Please summarize your professional experience.		
24	Α.	I have presented testimony before 30 state Public Service Commissions,		
25		the Federal Energy Regulatory Commission, and the Securities and		

1 1 2 4 5 SEP 10 5

FPSC-COMMISSION CLERK

Exchange Commission on rate of return and other subjects. I have also
appeared before several Subcommittees in the U.S. House of
Representatives and the U.S. Senate on utility financial matters.

I worked as a security analyst for about 30 years; and for each of the 22 years that *Institutional Investor* magazine polled investors, while I worked as a utility analyst, I was ranked as a leading utility analyst. I have also served on an Informational Task Force to the Energy Transition Team of the Reagan Administration on "Recommendations to Restore the Financial Health of the U.S. Electrical Power Industry," and as a task force member of the Financial Accounting Standards Board on utility accounting from an investor perspective. I was a faculty member for the Bank of New York (Irving Trust) Utility Finance Seminars for regulators and management on investor attitudes and the cost of capital for over fifteen years before forming my own firm.

- 16 Q. What is the purpose of your testimony?
- 17 A. I have been retained by Gulf Power Company (Company) to determine its
   18 cost of common stock equity.

- Q. Have you prepared exhibits that contain information referred to in yourtestimony?
- 22 A. Yes. An index of schedules is provided in Schedule 1. A statement of my
  23 occupational and educational history and qualifications is attached to this
  24 testimony as Schedule 2, pages 1-3. Schedule 3 through Schedule11 are
  25 also part of my testimony and were prepared by me except for page 2 of

T		Schedule 3, which was prepared by Southern Company.
2		
3	Q.	Do you have additional comments concerning your exhibit to your
4		testimony?
5	Α.	No.
6		Counsel: We ask that Mr. Benore's Exhibit (CAB-1) consisting
7		of 11 Schedules be marked as Exhibit
8		
9	Q.	What return do you recommend the Commission allow on Gulf Power
10		Company's common stock equity?
11	A.	I recommend the Commission allow a return on Gulf Power Company's
12		common stock equity of at least 13.0 percent. A summary of the model
13		results and my recommendation follow on Schedule 1a.
14		
15	GUI	DING PRINCIPLES
16	Q.	What economic, financial, and legal principles did you rely on in
17		determining Gulf Power Company's cost of common equity capital?
18	Α.	Gulf Power Company, like other investor-owned companies, is owned and
19		financed by investors who invest savings into its securities with the
20		expectation of earning a fair, risk-adjusted return. Investors are guided by
21		the principle that returns should rise and fall with higher and lower levels
22		of risk. U.S. government bond rates of return represent to them the cost
23		of lowest risk, long-term capital.
24		For a given level of risk, investors attempt to maximize the return
25		on their eavings and invest in those companies that provide the highest

expected return relative to the level of risk. Therefore, rational investors will not invest in securities that provide less than fair, risk-adjusted returns across markets (among utility common stocks, and versus other common stocks and bonds).

The choice of investment is voluntary, and investors have thousands of alternatives in which to invest. Since investors invest to earn as high a return as possible for a given level of risk, or the highest return on a risk-adjusted basis across markets, Gulf Power Company's securities must offer sufficiently attractive returns so that investors will invest in its securities.

Another important consideration in making the Company's securities sufficiently attractive to investors is to recognize that Gulf Power Company, unlike many non-regulated companies that do not provide indispensable services, cannot stop necessary investments in plant, or legislated environmental investment, when the availability of capital is constrained in the market, as it is from time to time.

Therefore, Gulf Power Company, which provides customers with indispensable energy services, must be sufficiently strong financially to cope with unforeseen events, and its securities must be attractive enough to access capital during adverse as well as more normal, market conditions.

The investor, therefore, is critical to the process of providing utility services to Gulf Power Company's customers. Existing investors expect and deserve fair treatment. New investors must be induced to invest in Gulf Power Company's securities instead of thousands of other

1		invesiment possibilities.		
2				
3	Q.	What legal principles did you rely on in determining Gulf Power		
4		Company's cost of common equity capital?		
5	A.	I relied on my understanding of the U.S. Supreme Court decisions in the		
6		Bluefield, Hope, and Permian Basin cases.		
7		Bluefield: "A public utility is entitled to such rates as will		
8		permit it to earn a returnequal to that generally being		
9		made at the same time and in the same general part of the		
10		country on investments in other business undertakings		
11		which are attended by corresponding risks and		
12		uncertainties" "The return should be reasonably sufficient		
13		to assure confidence in the financial soundness of the utility		
14		and should be adequate, under efficient and economical		
15		management, to maintain and support its credit and enable it		
16	to raise the money necessary for the proper discharge of its			
17		public duties."		
18				
19		Hope: "the investor interest has a legitimate concern with		
20		the financial integrity of the company whose rates are being		
21		regulated. From the investor or company point of view it is		
22		important that there be enough revenue not only for		
23		operating expenses but also for the capital costs of the		
24		business. These include service on the debt and dividends		
25		on the stock."		

1		"By that standard the return to the equity owner should
2		be commensurate with returns on investments in other
3		enterprises having corresponding risks. That return,
4		moreover, should be sufficient to assure confidence in the
5		financial integrity of the enterprise, so as to maintain its
6		credit and attract capital."
7		
8		Permian Basin: Regulatory decisions should: " reasonably be
9		expected to maintain financial integrity, attract necessary capital,
10		and fairly compensate investors for the risks they have
11		assumed"
12		These principles were more recently confirmed by the <u>Duquesne</u> decision
13		
14	Q.	What do these decisions mean to you for determining the cost of commor
15		equity capital for Gulf Power Company?
16	A.	The cost of common stock should: (1) provide Gulf Power Company with
17		a competitive, and achievable, investor return relative to other investments
18		on a risk-adjusted basis; (2) enable the Company to attract capital on
19		reasonable terms; and (3) allow Gulf Power to have a reasonable level of
20		financial integrity.
21		
22	<u>ECO</u>	NOMIC AND CAPITAL MARKET CONDITIONS
23	Q.	Please describe the economic outlook, and capital market conditions and
24		availability as they relate to Gulf Power Company.
25		

## Economic Outlook:

The U.S. economy is currently operating at a relatively low level of inflation, and investors generally believe that inflation will be contained at about 2.5 percent to 3 percent in the latest Value Line economic forecast. However, there is considerable uncertainty about the near-term growth rate of gross domestic product. Some investors fear an economic recession, and financial and economic problems in Japan, while others expect the growth rate in the economy to slow, but for the U.S. economy to avoid falling into an economic recession.

Value Line's latest economic forecast of August 10, 2001 in "Ratings & Reports," page 1480, shows projected real GDP growth of 1.6 percent for 2001 followed by 3.0 percent in 2002, and 3.8 percent for 2004-06. Meanwhile, the consumer price index is projected by Value Line to increase between 2.5 percent and 3.0 percent for 2001, 2002, and 2004-2006. For 2001, the average bond yield for AAA corporate bonds is 7.6 percent, and 7.9 percent and 8.0 percent for 2002 and 2004-06, respectively. For my cost of common stock equity analysis for Gulf Power Company, I used the current 7.1 percent yield for AAA corporate bonds.

#### Capital Market Developments

The dramatic slowdown in the growth rate for the U. S. economy along with related investor concern about a recession and falling earnings, coupled with an apparent overvaluation of technology stocks, has caused the common stock market to substantially decline. More recently, the stock market has partially recovered, but investors remain uncertain about

when the economic recovery will occur and how strong it will be.

Accordingly, capital market conditions have improved, but because of reduced investor confidence, are generally less favorable for raising capital than in recent years.

## Capital Access Problems

The Wall Street Journal reports that banks have tightened credit, and some household names like Xerox have had trouble accessing the credit markets. For utilities, Bloomberg reports that PSI Energy (previously Public Service of Indiana), a subsidiary of Cinergy, withdrew a planned debt offering in what was described as a troubled debt market. Yahoo also notes that: "There is currently \$311 million outstanding under the credit agreement, which was established after the Pennsylvania problems blocked GPU participation in the commercial paper market, the company said."

Another notable utility development is the precarious financial condition of two of the largest U. S. utilities, Southern California Edison and Pacific Gas & Electric. One of the companies has filed for bankruptcy protection, and the other is on the verge of bankruptcy. Both companies are unable to pass along higher costs of energy supply to customers as a result of regulatory restructuring. This development has reminded investors that even during periods of low inflation and moderate construction programs that electric power companies are subject to substantial risk.

# Recent Favorable Performance of Electric Stocks Disguises Problems

Nonetheless, investor concerns about an economic recession combined with the defensive nature of electric utility stocks (betas under 0.60 generally) along with expectations that the Federal Reserve will lower interest rates, caused electric utility stock prices to sharply rise in 2000.

This recent relative performance pattern is similar to 1998 when electric utilities did well for a while, but after investor attitudes became more positive, electric stock prices went back to their underlying investment fundamentals, and resumed their dramatic under-performance relative to the market until more recently when recession concerns reappeared.

Accordingly, it is questionable that the recent superior performance of electric stocks reflects a change in investor attitudes toward the regulated business of electric power companies. Further, the improved market performance of electric stocks also reflects earnings growth from non-regulated sales of electric power. As shown in Schedule 3, page 1 a longer view of the relative price performance of Standard & Poor's Electric Stocks, even with help from non-regulated business activities, versus the market, or the S&P 500, is very discouraging.

A similar discouraging performance can be observed in the spread between Moody's "A1" utility bond yields and long-term Treasuries. In the mid to late 1990s, the yield spread was about 75 basis points, or utility bond yields were higher than Treasuries by about 75 basis points. In mid-1998, the spread began to increase to the 125-150 basis points range as investors apparently became more concerned about competition risk for

electric power companies. The more recent adjustment to about 200 basis points corresponds with the announcement by the Treasury of buying back its debt in early 2000. A chart showing the yield spread appears as Schedule 3, page 2.

#### **ELECTRIC UTILITY STOCKS'**

#### INVESTMENT FUNDAMENTALS ARE POOR

#### Relative Performance

- Q. What has been the relative performance of electric stocks versus the market?
- 11 A. Electric company common stock prices have dramatically under12 performed the market. Since the onset of investor concern about
  13 wholesale and retail competition in the summer of 1993, the S&P Electric
  14 Stocks are up only 25 percent compared to 173 percent for the market, or
  15 the S&P 500. The annual performance differential is about 19 percent
  16 annually, or well above the differential risk. Supporting data is charted in
  17 Schedule 3, page 1.

Short of stopping investment in electric stocks, investors have sent about as strong a signal as possible that the return prospects for electric stocks have not been competitive with other common stock investment alternatives.

The poor performance of utility bonds and electric common stocks versus Treasury bonds and the S&P 500 clearly demonstrates that investors' perception of risk in electric stocks has risen; and that electric stocks, except when considerable uncertainty is present in the market,

have not been competitive with other common stock investment alternatives available to investors.

## Falling Relative Profitability and Rising Risk

- Q. Why have electric stocks lagged behind the market, and why should it beof concern to the Florida Public Service Commission?
- 7 A. There are three primary reasons for the non-competitive position of
  8 electric stocks relative to the market. The first is regulatory allowed
  9 returns on common stock equity have been too low. Second, regulatory
  10 restructuring, and wholesale, and to an increasing degree retail,
  11 competition have increased investor risk. Third, investors do not have an
  12 opportunity to earn the lower than appropriate returns allowed by
  13 regulators.

Allowed regulatory returns on common stock equity for the five years ending in 1990 averaged 13.1 percent, or 92 percent of the earned return on year-end common stock equity for the S&P 500. For the five years ending in 1995, the regulatory return fell to 78 percent of the S&P 500 return, and for the most recent five years ending in 2000 to 54 percent. Therefore, there has been a dramatic decline in the relative profitability of electric power companies based on allowed regulatory returns from almost parity with common stocks generally as measured by the S&P 500 to about one-half in the most recent five-year period. Unfortunately, the dramatic relative fall in profitability, or the regulatory return on common stock equity, for electric utilities occurred at the same time as the introduction of competition and higher risk into the electric

power industry. Supporting data is shown in Schedule 4, page 1.

Importantly, the projected return on common stock equity for the S&P 500 using growth estimates from First Call, IBES, and Zacks is expected to rise slightly to 22 percent. Therefore, just to hold to the already lower relative level of profitability, allowed returns on common stock would need to increase from current levels. Supporting data is shown in Schedule 4, page 2.

Simply put, (1) falling returns relative to other investment opportunities, (2) rising risk, and (3) the inability to earn allowed regulatory returns in the market, drove investors away from electric stocks to other investment alternatives, and are responsible for the very poor relative price performance of electric stocks.

# Investor Market Returns Versus Regulatory Book Returns

- 15 Q. Please explain why investors do not have an opportunity to earn the16 returns that regulators allow.
  - A. Many regulatory commissions rely on market based models, or the discounted cash flow (DCF), the equity risk premium (ERP) or bond yield plus equity risk premium, and capital asset pricing (CAPM) models to determine allowed returns. These models, when properly used, do indicate the investor-required-market-return. However, it should be recognized that these models determine the required market return by investors and not the regulatory return, which is a book return. When one return is exchanged for the other, or market returns indicated by the DCF, ERP, and CAPM models are used for the regulatory allowed return,

investors are unable to achieve the return they require under current market conditions.

3

- Q. Please explain why investors cannot achieve the allowed regulatory return
   under current market conditions.
- A. The DCF, ERP, and CAPM models only work for regulatory purposes when the price-to-book-value ratio is not significantly different from 1.0 times. Under current market conditions where prices are closer to 1.5 to 2.0 times book value, the regulatory return indicated by market based models will not yield, or produce, the intended growth rate and return required by investors. This can be illustrated with a simple mathematical example.

13

14

# Mathematical Example of Problem

- 15 Q. Please provide a mathematical example that shows that the DCF model
  16 (and other market based models in an efficient market with proper
  17 modeling) does not work for regulatory purposes when the price-to-book
  18 value ratio is significantly different from 1.0.
- 19 Column A
- 20 A. The mathematics are shown in the illustrative example provided on
  21 Schedule 1b. In this illustrative example, it is assumed in Column A that
  22 investors expect a 13.0 percent return on common stock equity, or book
  23 value, so that earnings per share are \$3.25 (\$25.00 book value times
  24 13.0 percent ROE). With a dividend of \$2.00, the dividend payout ratio is
  25 61.5 percent (DPS/EPS or \$2.00/\$3.25), and the earnings retention rate is

38.5 percent (percentage of earnings retained and not paid out as dividends, or 1.0 minus the dividend payout ratio). Sustainable earnings growth, therefore, is the return on common stock equity times the earnings retention rate or 5.0 percent (13.0 percent ROE times 38.5 percent earnings retention rate). This is the expected rate of growth for the price of the common stock in this illustration.

The expected-market-return to the investor is the price growth of 5.0 percent plus the current yield on the stock, which is also 5.0 percent (dividend of \$2.00 divided by the price of \$40.00), or 10.0 percent (Column A, row 10).

The table shows the method and building blocks to support the investor-expected-market-return of 10.0 percent with the expected 13.0 percent return on common stock equity in Column A. Row number and column letter identify each item in the table, and a formula for the derivation of the values in Columns A, B, and C are also shown.

#### Column B

For Column B, it is assumed that the 10.0 percent market-required-return determined using the DCF test (in an efficient market, the DCF, ERP and CAPM investor-required-market returns should be similar) is adopted as the regulatory-allowed-return. As shown, the regulatory return on common stock equity is much lower than the 13.0 percent expected by investors and embedded in their earnings and common stock price growth expectations.

The 10.0 percent regulatory-allowed-return will produce only a 2.0 percent growth rate and a 7.0 percent (Column B, rows 8 and 10)

market return to investors (price growth of 2.0 percent plus the current yield of 5.0 percent). The 10.0 percent regulatory return, instead of the 13.0 percent expectation of investors, produces insufficient earnings to produce the earnings growth rate and total return expected by investors of 10.0 percent. Therefore, the allowed return of 10.0 percent, which produces only a 7.0 percent investor achievable-market-return, yields unacceptable results for investors.

# Columns C and D

Column C shows that investors can only earn their required 10.0 percent market return when the price-to-book-value ratio is 1.0 times instead of 1.6 times in the illustration, or when the price and book value are both \$25.00. In that event, an allowed regulatory return of 10.0 percent produces a market return to investors of 10.0 percent (Column C, row 10).

Unfortunately, as shown in Column D, a price drop of nearly 40 percent would be necessary to achieve the results shown in Column C, which is representative of current market conditions. I do not know of any investors who would invest on the basis of incurring a near 40 percent decline in the value of their investment before having the opportunity to earn their required 10.0 percent market return. Investors invest to make, not lose, money and knowledgeable investors would reject the common stock in this illustrative example as an investment.

This example, therefore, clearly shows that: (1) market-based tests (DCF, ERP, and CAPM) only work for regulatory purposes when the price-to-book ratio is not significantly different from 1.0; and (2) that it is

necessary to transform regulatory-allowed-returns under current market
conditions to the necessary level so that investors have a reasonable
opportunity to earn their required market returns, or in this example
13.0 percent. Otherwise, the ability to attract capital will deteriorate and
hinder the ability of Gulf Power Company to provide reliable utility services
to customers.

7

8

# Transformation Specifics

9 Q. Please explain what transformation is.

reliable utility services to customers.

10 A. Transformation is the process that determines the necessary regulatory
11 book return so that investors have an opportunity to earn their required
12 market return. From another perspective, it is the determination of the
13 appropriate regulatory return on common stock equity that yields or
14 produces the investor expected growth rate and market return.
15 Transformation is a necessary prerequisite to capital attraction and

17

16

- 18 Q. How is transformation done?
- 19 A. Transformation is easily done through an iterative process that determines
  20 the necessary regulatory return to produce sufficient earnings and related
  21 earnings growth so that investors have an opportunity to earn their
  22 required return in the market.

23

- 24 Q. Why is transformation necessary?
- 25 A. Common sense and investment theory indicate that investors must

receive fair compensation for the use of their capital, or comparable returns on a risk adjusted basis versus other investment opportunities. If not, they will over time invest their capital elsewhere. This is because informed investors have many alternative investment alternatives where their return expectations have a reasonable chance for a given risk level to be fulfilled.

Therefore, it is necessary that the regulatory return, which is a book return, provide investors with a reasonable opportunity to earn their required market return. This is accomplished through transformation of the standard DCF return, and the return from other market based models, into the necessary regulatory return.

12

13

20

24

25

11

1

2

3

4

5

6

7

8

9

10

# Customer Benefits from Transformation

- 14 Q. From Gulf Power Company's customer perspective, why is transformation15 necessary?
- 16 A. Transformation from a customer perspective is necessary to:
- 1. avoid dictating rather than reflecting investor expectations, driving
  the stocks to book value, causing investors to lose money, and
  repelling rather than attracting investors;
  - insure that Gulf Power Company has financial integrity;
- 21 3. provide investors with an opportunity to earn competitive returns in
  22 Gulf Power Company's common stock (its comparable companies)
  23 versus other stocks so that capital attraction can reliably occur;
  - protect Gulf Power Company's customers from higher risk and related capital costs, less reliable access to the capital markets,

and over time de	eteriorating service.
------------------	-----------------------

# Regulatory Response to Problem

- Q. Is there any evidence that regulatory commissions are concerned about
   the inability of investors in regulated utilities to have an opportunity to earn
   their required market returns when the DCF, ERP, and CAPM models are
   used to determine regulatory allowed returns?
  - A. Yes. I conducted a study for investor-owned electric utilities of the regulatory-allowed-returns, and the DCF (k = DPS1/Po + g) investor-required-market-returns, for years 1985 through 1999, using both Value Line projected earnings and dividend growth rates, which were updated annually, for 32 larger electric companies. As shown in Schedule 5, regulatory allowed returns have exceeded investor-required-market-returns indicated by the earnings per share version of the DCF model by 1 to 3 percentage points in recent years versus similar returns when price-to-book ratios were close to 1.0. The same is true for the dividend per share version of the DCF model where allowed regulatory returns exceeded the DCF model results by 4 to 6 percentage points in recent years.

- Q. Why do you believe regulators are generally allowing higher returns than indicated by the DCF, ERP, and CAPM models?
- 23 A. It is clear from this study that regulatory commissions for various reasons
  24 have concluded that higher returns than indicated by cost of common
  25 stock models that determine the investor-required-market return are

necessary for protecting consumer interests. Regulators, in my judgment, have observed that regulatory-allowed-returns in recent years have been insufficient to enable investors to earn risk-adjusted returns comparable to other common stocks as shown in the chart on Schedule 3, page 1. It logically follows that over time, if regulatory returns continue to be too low and investors are unable to earn required returns that both old and new investors will increasingly turn to other common stock investments. This outcome, which will hinder the ability of regulated utility companies to attract capital at reasonable costs, is contrary to the interests of Gulf Power Company's customers.

Furthermore, regulators probably recognize that investors are not as mechanized in making investments as the models suggest. Each of the models used to measure investor expectations is theoretically based and makes assumptions about investor behavior that may not prevail in the real world of investing.

Therefore, regulators have been allowing higher regulatoryallowed-returns than indicated by market-based models.

#### Non-Transformation Possible Consequences

- Q. What are the long-term consequences for the financial integrity of utilities and their ability to provide energy services to their customers by using the non-transformed-market-required returns shown at this time by the DCF, ERP, and CAPM models?
- 24 A. Over time, the poor stock performance results since 1993 would likely
  25 continue, and jeopardize the ability of Gulf Power Company to access the

capital markets. This in turn could undermine Gulf Power Company's ability to provide reliable utility services to customers.

3

4

5

6

7

8

9

10

11

12

1

2

## <u>Transformation Conclusion</u>

In the capital markets, I believe it is fair to say that there is no free lunch. Investors are already voting with their feet and moving out of electric stocks, as shown on Schedule 3, page 1. New investors have been buying, but at decreasing prices relative to other common stocks. Eventually, if this trend continues, Gulf Power Company will ultimately need to rely on speculative investors with high return expectations and uncertain capital inflows. Surely this would be adverse to the interests of Gulf Power Company's customers.

13

- 14 Q. Have utility companies ever faced problems in raising capital?
- 15 A. Yes. Utilities experienced capital attraction problems in 1974-75 when companies rated "Baa" ("BBB" S&P equivalent) by Moody's were unable 16 17 to sell long-term, first mortgage bonds. There were ten consecutive 18 months spanning 1974-75 when "Baa" rated utility companies by Moody's were not in the market, although "A" rated companies were able to sell 19 long-term bonds in each of the ten months. Subsequently, a number of 20 21 companies involved with nuclear power construction went bankrupt, or nearly so, and were blocked from the capital markets. More recently, 22 Federal Reserve Chairman Greenspan noted problems of investment 23 24 grade companies attracting capital during the Russian debt default in 25 1998.

Most recently, banks have begun to tighten credit, as noted earlier in my testimony; household names like Xerox were denied access to the short-term credit market; and Cinergy's PSI Energy (previously Public Service of Indiana) withdrew a planned "bond sale in what has been an uncertain environment for most corporate bonds," according to *Bloomberg*, a financial news service GPU as noted by *Yahoo* has had problems in the commercial paper market. Of course, two other utilities, Pacific Gas & Electric and Southern California Edison, have filed for bankruptcy protection, or are on the verge of doing so, and have been denied access to the capital markets.

- 12 Q. Should capital attraction problems that occur from time to time be of13 interest to the Commission?
- 14 A. Yes. Because of the indispensable nature of electric power service and
  15 future uncertainty, it is important that Gulf Power Company be financially
  16 strong so that it can attract needed capital in both easy and difficult capital
  17 market conditions at reasonable costs.

#### Recommendations

20 Q. In light of the growing risk of capital attraction problems at this time for
21 electric power companies and the weak investment fundamentals of
22 electric stocks generally, what do you recommend to the Commission?
23 A. I recommend the Commission recognize the strong signal sent by the
24 market that past allowed returns, which cannot be achieved by investors,

have been inadequate relative to other investment alternatives; and that

higher returns be allowed to restore investor confidence, and provide a firm basis for investors to invest in Gulf Power Company's securities.

Once the slowdown in the economy ends, investors will likely turn their attention to "offensive" instead of "defensive" stocks, and as a result will be less interested in investing in electric common stocks including the Company's comparable companies, or Gulf Power Company.

It is important, therefore, to improve the investment outlook for Gulf Power Company by increasing the allowed return on common stock equity to at least 13.0 percent so that its common stock (its comparable companies) is competitive with other common stock investment alternatives.

#### Meaning Versus Measurement

From another perspective, it is also useful to consider that meaning and measurement can be very different in terms of using judgment to interpret the results of theoretical models.

Reliance on theoretical models for determining the cost of common stock creates the danger of over-quantification of a complex issue. In the November/December 1997, *Financial Analysts Journal*, Jack Gray in "Overquantification," pages 5-11, put it very succinctly.

The moral is that the precise measurement or calculation of a thing is profoundly different from the interpretation, significance, and meaning of that thing. Meaning is important, not measurement per se. We confuse the two because measurement appears to be precise, objective, and

1		simple (it is not any of those) whereas meaning appears to		
2		be vague (or at least flexible), subjective, and complex (it is		
3	all of those.) By overemphasizing the first at the expense of			
4		the second, we are vulnerable to the bean-counter's		
5	paradigm: If it cannot be quantified or measured, it has no			
6	significance (an extreme form of which is that there is no			
7		meaning, only measurement).		
8				
9	Q.	What do you believe has meaning for Gulf Power Company?		
10	A.	What has meaning in my judgment for Gulf Power Company is that		
11		investors have rejected past regulatory returns for electric and gas utilitie		
12		as too low relative to returns offered by other investment alternatives on		
13		risk-adjusted basis. It is important, therefore, that Gulf Power Company		
14		be allowed a higher return on its common stock equity investment so that		
15		it is competitive with other investment opportunities available to investors		
16				
17		SUMMARY OF GULF POWER COMPANY'S REGULATORY RETURN		
18		ON COMMON STOCK EQUITY REQUIREMENT		
19		Comparable Companies		
20	Q.	Please summarize your analysis of the return on common stock equity		
21		that you recommend be allowed for Gulf Power Company.		

22

23

24

25

A.

I recommend that comparable risk companies be used to improve the

to better reflect the risk of Gulf Power Company, rather than using

Southern Company, which is a much larger company and one whose

accuracy of Gulf Power Company's cost of common equity estimate, and

recent lines of business involved higher business risk activities.

Nine risk measures were considered in selecting companies comparable in risk to Gulf Power Company as well as consideration of the merger status of companies. While these companies best reflect the risk of the Company, it is my judgment that the risk of Gulf Power Company's common stock equity is moderately lower than for its comparable companies. An adjustment to recognize the lower risk will be made in the final recommendation of the regulatory return on common stock equity to the Commission.

A discussion of risk measures used to determine the Company's comparable companies, the specific selection criteria, and Gulf Power Company's eight comparable companies are shown in Schedule 6.

#### Cost of Common Stock Definition

In my analysis, the cost of common stock definition provided by Petty, Keown, Scott, and Martin in *Basic Financial Management*, Sixth Edition, Page 933, Prentice Hall was used. They note:

The cost of common stock: The rate of return the firm must earn in order for the common stockholders to receive their required return.

#### Tests Employed

Three market-based models, or the DCF, ERP, and CAPM, were employed to determine the investor-required-market return. The investor-required-market return was then transformed into the necessary book, or

1		regulatory-allowed-return, to enable investors to have an opportunity to
2		achieve their required-market-return. The comparable earnings model
3		was also used to determine the expected return on common stock equity
4		by investors.
5		A full description of the four cost estimation models, methodology,
6		and data inputs are provided in Schedule 7 for the DCF Model,
7		Schedule 8 for the Equity Risk Premium model, Schedule 9 for the CAPM
8		and Schedule 10 for the Comparable Earnings method.
9		
10		Discounted Cash Flow
11	Q.	What market and regulatory returns did your standard (price-to-book
12		ratio = 1.0), and transformed DCF model analyses show?
13	A.	The standard DCF model indicated an investor required market return of
14		11.7 percent before and 11.9 percent after flotation costs. If the
15		11.7 percent return were used as the allowed regulatory return, however,
16		the investor-achievable-market-return would only be 9.8 percent.
17		Therefore, it is necessary to transform the 11.7 percent investor-required-
18		market return into the regulatory-book-return that will produce sufficient
19		earnings to enable the investor expected growth rate and return to occur.
20		The necessary regulatory return to produce an 11.7 percent market return
21		for investors is 13.6 percent before flotation costs.
22		Supporting data including a description and methodology for the
23		DCF model is shown in Schedule 7.
24		
25		

Equity Risk Premium
---------------------

- Q. Please review the results of your price-equals-book-value Equity Risk
   Premium test for Gulf Power Company.
- A. The Equity Risk Premium (ERP) test consists of the sum of the bond yield plus the additional return necessary to compensate investors for the higher risk of investing in Gulf Power Company's common stock (its comparable companies). As with the DCF model that shows investor-required-market returns, it is necessary to recognize material differences in stock prices versus book values.

The higher return required by investors for investing in Moody's Electric Common Stocks than in long-term U.S. Government bonds, or the equity risk premium, is 5.0 percentage points.

The equity risk premium of 5.0 percentage points plus the yield on long-term U.S. Government bonds over the last month of 6.4 percent, normalized for the impact of the Treasury's planned buyback of its long-term debt, shows an investor-required-market-return of 11.4 percent before flotation costs. Investor risk for Gulf Power Company is moderately lower than for Moody's Electric Companies. Nonetheless, investors look forward when investing, and therefore, projected data, where available, is preferred for determining investor expectations. Projected CAPM equity risk premiums for Gulf Power Company's comparable companies are materially higher than historical at 5.1 percent versus 3.9 percent respectively. Therefore, the historical equity risk premium requirement of investors using Moody's Electric Power Companies is likely to understate investor requirements. On balance, I

•		believe the 5.0 percentage point equity risk premium is appropriate to use			
2		for Gulf Power Company.			
3		In order for investors to have an opportunity to earn their required			
4		market return of 11.4 percent, a regulatory return of 13.3 percent is			
5		necessary. Supporting data including a model description and			
6		methodology are provided in Schedule 8.			
7					
8		Capital Asset Pricing Model			
9	Q.	What did your price-equals-book-value CAPM test show the market and			
10		regulatory returns for Gulf Power Company to be?			
11	A.	Two different versions of the CAPM (standard CAPM and Morin Empirical			
12		CAPM) showed an average required-market-return by investors for Gulf			
13		Power Company of 11.4 percent before flotation costs. A regulatory			
14		return of 13.3 percent is necessary so that investors have an opportunity			
15		to earn their required market return of 11.4 percent.			
16		Supporting data, description and methodology for the CAPM			
17		appear in Schedule 9.			
18					
19		Comparable Earnings			
20	Q.	Did you also perform a comparable earnings analysis of the investor-			
21		expected-return on common equity for Gulf Power Company?			
22	Α.	Yes. The Comparable Earnings (return on common stock equity			
23		comparable to other similar risk stocks) test shows a cost of common			
24		equity for Gulf Power Company of 13.3 percent. Because this is a book-			
25		to-book test, or the investor expected return on common stock equity and			

'		the regulatory allowed return on confinion stock equity, there is no need			
2		for transformation.			
3		A description and justification for the Comparable Earnings Model			
4		along with the data inputs are shown on Schedule10.			
5					
6		Flotation Cost Adjustment			
7	Q.	Why is an adjustment necessary for flotation costs, and how did you			
8		determine the flotation cost adjustment for Gulf Power Company?			
9	Α.	The amount of common stock equity invested by investors is reduced by			
10		issuance costs in the sale of new common stock when recorded on the			
11		balance sheet of Gulf Power Company. Consequently, the earnings base			
12		(amount of investment after issuance costs) is lower than the investment			
13		by investors. It is necessary, therefore, to increase the return to investors			
14		so that resulting earnings on the reduced investment represent a fair			
15		return on the full amount of their investment. The necessary adjustment			
16		based on flotation costs of 3 percent is 0.2 percent.			
17		An explanation for why a flotation cost adjustment is necessary is			
18		provided in Schedule 11.			
19					
20		OVERALL RECOMMENDATION TO THE COMMISSION			
21		FOR GULF POWER COMPANY			
22	Q.	What return on common stock equity do you recommend the Commission			
23		allow Gulf Power Company?			
24	A.	I recommend a return that will enable Gulf Power Company to provide			
25		investors with a reasonable opportunity to earn their required-market-			

return. This is a necessary prerequisite for capital attraction and reliable utility services to customers.

The three market based tests used, with transformation, show an average expected market return by investors of 13.4 percent before flotation costs, and with flotation costs of 0.2 percent, 13.6 percent. The comparable earnings test indicates a 13.3 percent investor expected return on common stock equity, which would indicate a 13.3 percent regulatory return on common stock equity.

As noted on Schedule 6, Gulf Power Company's risk is similar to its comparable companies. Nonetheless, the Company's financial risk is considerably below its comparable companies, and its revenues are entirely derived from the electric power businesses, while those of its comparable companies reflect in some instances natural gas distribution revenues and non-utility revenues. Moreover, the Florida Public Service Commission's regulatory ranking is a bit higher than for the Company's comparable companies. However, the Company is much smaller than its comparable companies, which increases its business risk.

Overall, it is my judgment that at least a 13.0 percent return on common stock equity for Gulf Power Company is necessary to: (1) fulfill investor expectations, (2) enable Gulf Power Company to reliably access the capital markets in good and bad market conditions, and (3) continue to provide reliable service at reasonable costs to its customers.

Therefore, I recommend the Florida Public Service Commission allow a return on Gulf Power's common stock equity of at least 13.0 percent.

- 1 Q. Does that complete your testimony?
- 2 A. Yes, thank you, it does.

#### AFFIDAVIT

STATE OF MAINE	)	Docket No. 010949-El
	)	
COUNTY OF HANCOCK	)	

Before me the undersigned authority, personally appeared Charles A.

Benore, who being first duly sworn, deposes, and says that he is the President of Benore Financial Consulting, Inc., 125 West Street, Bar Harbor ME 04609, that the foregoing is true and correct to the best of his knowledge, information, and belief. He is personally known to me.

Charles A. Benore

President, Benore Financial Consulting, Inc.

Notary Public, State of Maine at Large

JUDITH W. FULLER, Notary Public
My Commission Expires My Commission Expires 11/1/2005

Docket No. 010949-EI

# Florida Public Service Commission Docket No. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No. \_\_\_(CAB-1)

Schedule 1

INDEX	Schedule Number
Index of Schedules	1
Summary of Model Results	1a
Iliustrative Example - Model Results	1b
Occupational and Educational Qualifications	2
Relative Performance - Electric Stocks	3
Regulated Returns versus S&P 500	4
Regulated Returns versus Standard DCF	5
Gulf Power Company's Comparable Companie	es 6
Standard and Transformed DCF Results	7
Equity Risk Premium Analysis	8
Capital Asset Pricing Model	9
Comparable Earnings Model	10
Flotation Costs	11

# Summary of Test Results to Determine the Appropriate Regulatory Allowed Return for Gulf Power Company's Common Stock Equity

	Gulf Power Comparable			
Tests	Companies (a)	Reference		
1. DCF				
Standard DCF (assumes 1.0 price/book)	11.7%	Schedule 7, Page 14		
Transformed DCF	13.6%	Schedule 7, Page 15		
2. Equity Risk Premium (assumes 1.0 price/book)	11.4%	Schedule 8, Page 15		
Transformed Equity Risk Premium	13.3%	Schedule 8, Page 15		
3. CAPM				
Average Standard CAPM (assumes 1.0 price/book)	10.9%	Schedule 9, Page 13		
Average Empirical CAPM (assumes 1.0 price/book)	<u>12.0%</u>	Schedule 9, Page 13		
Average Standard and Empirical CAPM's	11.4%	Schedule 9, Page 13		
Transformed CAPM	13.3%	Schedule 9, Page 14		
4. Comparable Earnings Test	13.3%	Schedule 10, Page 5		
Average of Four Tests	13.4%			
Range of Four Tests	13.3% to 13.6%			
Midpoint of Four Test Range	13.5%			
Recommended Return on Common Stock				

At Least 13.0%

(a) All estimates except for the "at least 13.0%" recommended return on common equity exclude flotation costs of 0.2%

**Equity for Gulf Power Company** 

Docket No. 010949-EI
GULF POWER COMPANY
Witness: Charles A. Benore

Schedule 1a

Florida Public Service Commission Docket No. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 1b

# Regulatory Returns Based on DCF and Other Market Based Model Results Do Not Produce or Yield Either the Growth Rate or Required Market Return by Investors Under Current Market Conditions

# investor Shortfall Example When 10% is Used instead of 13% DCF Cost of Common Stock

		A		В		С	D
	(	Current	Re	gulatory		Price is	
	ı	nvestor	10.0	XXX ROE		Dríven to	Price
	Ех	pectations	Re	esult (a)	Во	ok Value (b)	Decline
1 Current Price (Given)	\$	40.00	\$	40.00	\$	25.00	37.5%
2 Book Value (Given)	\$	25.00	\$	25.00	\$	25.00	
3 Return on Common Stock Equity		13.00%		10.00%		10.00%	
4 Earnings Per Share (2 * 3)	\$	3.25	\$	2.50	\$	2.50	
5 Dividends Per Share (Given)	\$	2.00	\$	2.00	\$	2.00	
6 Dividend Payout Ratio (5 / 4)		61.54%		80.00%		80.00%	
7 Earning Retention Rate for Growth [1.0 - 6]		38.46%	- /	20.00%		20.00%	
8 Sustainable Growth Rate (3 * 7)		5.00%	-	2.00%		2.00%	
9 Current Yield (5 / 1)		5.00%	<u> </u>	5.00%	,	8.00%	
10 Investor Achievable Market Return (8+9)		10.00%		7.00%		10.00%	

<sup>(</sup>a) DCF 10.0% Investor expected return used as allowed regulatory return; also applicable to ERP and CAPM

<sup>(</sup>b) Investors do not expect price to drop to \$25.00, or else it would be selling at \$25.00

Florida Public Service Commission

Docket No. 010949-El GULF POWER COMPANY Witness: Charles A. Benore

Exhibit No. \_\_\_(CAB-1)

Schedule 2 Page 1 of 3

#### Qualifications of Charles A. Benore

EMPLOYER AND BUSINESS ADDRESS:

BENORE FINANCIAL CONSULTING, INC.

125 West Street

Bar Harbor, Maine 04609

**DUTIES** 

Provide consulting services to utility companies.

**EDUCATION** 

Ohio University - Bachelor of Science in Commerce Ohio State University - Master of Arts in Economics

WORK EXPERIENCE

Public Utility Securities Analyst and Investor and Utility

Company Advisor for 32 years, and employed successively by Duff & Phelps, E.I. duPont, Salomon Brothers, PaineWebber, and since May, 1995 Benore

Financial Consulting, Inc.

**TESTIMONY** 

Presented testimony before 30 state Public Service Commissions, the Federal Power Commission and Federal Energy Regulatory Commission on cost of capital, fuel and purchased gas cost recovery, a cash return on construction work in progress, earnings attrition, financial integrity, an appropriate capital structure and incentive regulation.

Testified before the <u>Securities and Exchange</u> <u>Commission</u> on the exchange ratio for a utility acquisition.

Testified before the <u>U.S. House of Representatives:</u>
<u>Subcommittee on Energy Conservation and Power on</u>
"Financial Condition of Utilities and Their Future in the 1980's," and on "Earning a Cash Return on Construction

Florida Public Service Commission
Docket No. 010949-El
GULF POWER COMPANY
Witness: Charles A. Benore
Exhibit No. \_\_\_\_(CAB-1)
Schedule 2
Page 2 of 3

Work in Progress; "Subcommittee on Science and Technology on "The Future of the Nation's Energy Utilities"

In the <u>U.S. Senate: Subcommittee on Banking, Housing, and Urban Affairs</u> on "Reform of the Public Utility Holding Company Act of 1935."

### PRINCIPAL PRESENTATIONS

NARUC Annual Convention and Regulatory Symposium on "Utility Finance"

NARUC Staff Subcommittee of Accounts on "Accounting Procedures and Standards Related to Capital Formation in the Electric Power Industry"

Iowa State University Regulatory Conference on "Investor Appraisal of Return on Plant Under Construction" and "Financial Policy Goals for a Possible 'Star Wars' Environment"

American Bar Association National Institute on "An Investor Perspective of Financial Integrity and Comparability"

University of Florida Public Utility Research Center on "Financial Integrity and the Ability to Raise Capital"

Michigan State University Utility Conference on "The Financial Viability Prospects of the Electric Utility Industry"

Edison Electric Institute Financial Conference on "Dividend Policy and Common Share Valuation of Electric Utilities," "Closing the Gap between Allowed and Realized Return on Common Stock Equity," and "New Valuation Methods for a New Industry Structure."

Florida Public Service Commission

Docket No. 010949-El

GULF POWER COMPANY Witness: Charles A. Benore

Exhibit No. \_\_\_(CAB-1)

Schedule 2 Page 3 of 3

**FACULTY** 

For more than fifteen years, I was the <u>Bank of New York's (previously Irving Trust)</u> faculty member providing instruction on determining the cost of common stock equity for regulators and management, and assessing investor attitudes towards utility common stocks.

TV PROGRAM APPEARANCES

Wall Street Week
Wall Street Perspective
Cable News Network

TASK FORCES

Informational Task Force to the Energy Transition Team of the Reagan Administration on "Recommendations to Restore the Financial Health of the U.S. Electrical Power Industry"

<u>Financial Accounting Standards Board</u> on Utility Accounting from an Investor Perspective

**SEMINARS** 

Investment Management Workshop, Harvard University Investments Risk Analysis Seminar at the University of Virginia Securities Analysis Seminar at Rockford College

MEMBERSHIPS

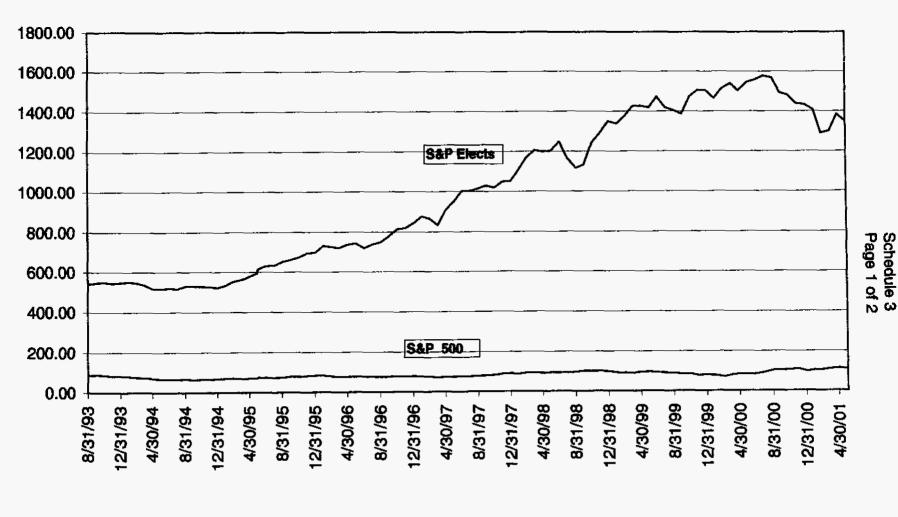
Association for Investment Management and Research Chartered Financial Analyst

**HONORS** 

Ranked among national leading utility analysts for 22 consecutive years, or all years when employed as a securities analyst according to a poll conducted by *Institutional Investor* magazine

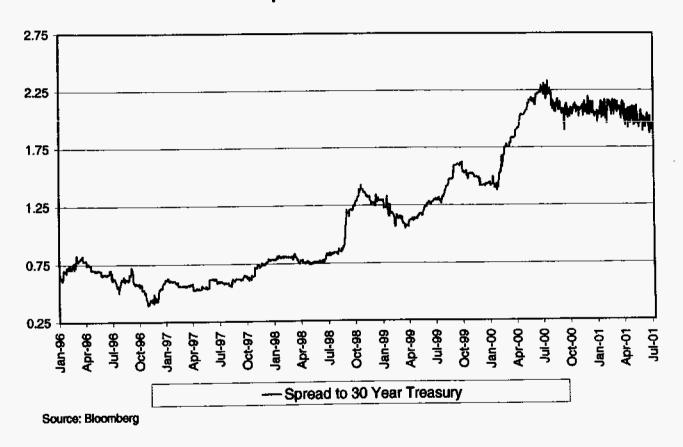
Phi Kappa Phi Beta Gamma Sigma

### Performance of Electric Stocks Versus Market Has Been Very Poor



Florida Public Service Commission Docket No. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No. \_\_\_(CAB-1)

#### 30 Year A1 Utility Bond Index **Spread to Treasuries**



Page 2 of 2 Schedule 3 Exhibit No. Charles A. Benore

Florida Public Service Commission Docket No. 010949-El GULF POWER COMPANY

Florida Public Service Commission Docket No. 101949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 4 Page 1 of 2

#### Historical Returns on Common Stock Equity for Standard & Poor's 500 and Regulatory Allowed Returns on Common Stock Equity by State Regulatory Commissions

		l'Chara	Electric	- Chan	Electric
	000 500	Five	Utility	Five	ROE
	S&P 500	Year	Regulatory	Year	% of
-	ROE	Average	ROE	Average	S&P ROE
1980	14.46%				
1981	14.04%				
1982	11.24%				
1983	12.00%				
1984	13.59%		15.32%		
1985	11.67%		15.20%		
1986	11.43%		13.93%		
1987	13.05%		12.99%		
1988	16.81%		12.79%		
1989	15.53%		12.97%		
1990	14.20%	14.2%	12.70%	13.1%	92%
1991	10.25%		12.55%		
1992	12.60%		12.09%		
1993	14.57%		11.41%		
1994	18.90%		11.34%		
1995	19.27%	15.1%	11.55%	11.8%	78%
1996	21.30%		11.39%		
1997	20.89%		11.40%		
1998	18.50%		11.66%		
1999	23.49%		10.77%		
2000	E20.9%	21.0%	11.43%	11.3%	54%

<sup>(</sup>a) Latest Year S&P data available from source is 1999; 2000 Estimated Source: S&P and Regulatory Research Associates

Florida Public Service Commission Docket No. 010949-EI GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 4 Page 2 of 2

# Projected Return on Common Stock Equity for S&P 500

		%		YR-END	AVG	ROE on
_	EPS	Gwth.	DPS	BookValue(a)	BookValue	Avg.BkVal
2000	50.00	<u> </u>	16.27	238.80	221.94	22.5%
E2001	57.70	15.4%	18.78	277.72	258.26	22.3%
E2002	66.59	15.4%	21.67	322.64	300.18	22.2%
E2003	76.84	15.4%	25.00	374.48	348.56	22.0%
E2004	88.67	15.4%	28.85	434.30	404.39	21.9%
E2005	102.33	15.4%	33.30	503.33	468.81	21.8%
2001-20	05 Avg.					22.2%

E: Estimated

Sources: EPS growth rate projection is from Schedule 9, Page 12 2000 Data from S&P.

Book Values for 2001-05 are previous year plus retained earnings for the following year.

#### Regulatory Allowed Returns Have Exceeded the Standard DCF Model Return as Price-to-Book Value Ratios Have Increased

_	DCF EPS Model Return	DCF DPS Model Return	Average EPS & DPS DCF	Regulatory Allowed Return	Regulatory Return Over EPS DCF Return	Regulatory Return Over DPS DCF Return	Regulatory Return Over Avg. DCF Return	Moody's Elect. Pw. Co's. Price to Book Ratio
1985	15.1%	15.2%	15.2%	15.2%	0.1%	0.0%	0.1%	1.08
1966	13.6%	13.9%	13.8%	13.9%	0.3%	0.0%	0.2%	1.26
1987	11.3%	12.0%	11.7%	13.0%	1.7%	1.0%	1.4%	1.05
1988	11.8%	12.3%	12.1%	12.8%	1.0%	0.5%	0.8%	1.15
1989	11.2%	11.9%	11.6%	13.0%	1.8%	1.1%	1.5%	1.37
1990	10.1%	10.7%	10.4%	12.7%	2.6%	2.0%	2.3%	1.39
1991	10.4%	10.7%	10.6%	12.6%	2.2%	1.9%	2.1%	1.58
1992	9.7%	9.4%	9.6%	12.1%	2.4%	2.7%	2.6%	1.51
1993	9.3%	9.0%	9.2%	11.4%	2.1%	2.4%	2.3%	1.59
1994	9.2%	8.1%	8.7%	11.3%	2.1%	3.2%	2.7%	1.23
1995	10.2%	8.9%	9.6%	11.6%	1.4%	2.7%	2.1%	1.52
1996	9.3%	7.2%	8.3%	11.4%	2.1%	4.2%	3.2%	1.38
1997	9.3%	6.9%	8.1%	11.4%	2.1%	4.5%	3.3%	1.51
1998	8.8%	6.0%	7.4%	11.7%	2.9%	5.7%	4.3%	1.97
1999	10.0%	5.6%	7.8%	10.8%	0.8%	5.2%	3.0%	NA
2000				11.4%				

NA: Not Available

Sources: AOL; Value Line, PaineWebber; RRA

Fiorida Public Service Commission
Docket No. 010949-IE
GULF POWER COMPANY
Witness: Charles A. Benore
Exhibit No.\_\_\_(CAB 1)
Schedule 5
Page 1 of 1

Florida Public Service Commission Docket No. 010949-El Witness: Charles A. Benore Exhibit No.\_\_\_\_(CAB-1) Schedule 6 Page 1 of 6

#### **GULF POWER COMPANY'S COMPARABLE COMPANIES**

# DESIRABILITY OF USING A COMPARABLE RISK GROUP OF COMPANIES TO DETERMINE GULF POWER COMPANY'S COST OF COMMON STOCK

I believe it is necessary to use a group of comparable utility companies (i.e., companies that are reasonably comparable in risk to Gulf Power Company) to determine Gulf Power Company's cost of common stock. When using a group of companies instead of just one, there is an opportunity for distortions in one direction to be offset by distortions in the opposite direction, which should improve the accuracy of the cost estimate versus using just one company.

Moreover, Southern Company is a much larger company than Gulf Power.

Use of a comparable group of utility companies should mitigate possible associated distortions, and enable a better determination of the cost of common stock equity for Gulf Power Company to be made.

I recommend, therefore, that the Commission rely on companies of comparable risk, with an adjustment to account for any risk differences between Gulf Power Company and its comparable companies.

#### COMPARABLE COMPANY SELECTION CRITERIA

After reviewing the risks faced by investors, nine selection criteria along with merger considerations were used as a guide to companies with comparable risk to Gulf Power Company.

Florida Public Service Commission Docket No. 010949-El Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 6 Page 2 of 6

Common stock risks faced by investors are:

#### Risks Common to Most Common Stocks

- 1. Inflation risk -- cash flows will have more or less purchasing power depending on the rate of inflation.
- 2. Interest rate risk -- increases in interest rates and the cost of capital will reduce the value of an investment.
- 3. Market risk -- a decline in the stock market will reduce the value of an investment.

#### Risks Materially Different from Company to Company

- 4. Business risk -- business risk refers to all risks that affect the relationship between revenues and costs of a company excluding the effect of using debt to finance the assets of a company. An increase in business risk will depress the value of the security.
- 5. Financial risk -- financial risk reflects using debt to finance assets and its impact on the balance between revenues and costs. Interest, unlike dividends, must be paid even during adverse circumstances. As a result, when revenues decline relative to costs, a leveraged company will incur a greater reduction in income than a non-leveraged company.

Further, debt can expose companies to the risk of bankruptcy. An increase in leverage, or debt, and a resulting lower equity ratio will increase financial risk, and depress the price of the security.

6. Marketability Risk -- this risk reflects the ability to sell the security at the last closing price, and correlates with the size of the company. Because trading

Florida Public Service Commission Docket No. 010949-El Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 6 Page 3 of 6

costs are small portions of the selling price of stocks listed on major stock exchanges, marketability risk does not significantly affect the cost of common stock for Gulf Power Company.

The business and financial risks can vary materially from company to company. Therefore, comparable risk companies should have about the same business and financial risks.

# SELECTION CRITERIA FOR GULF POWER COMPANY'S COMPARABLE COMPANIES

A combination of broad and narrow measures of risk were used:

- 1. Predominately a regulated company followed by Bloomberg, C. A. Turner, and Value Line;
- 2. Standard and Poor's business profile was 4 or 5 (reflects "markets and service area economy; competitive position; fuel and power supply; operations; asset concentration; and regulation and management,") on a scale of 1-10 where 1 is best. Integrated electric companies like Gulf Power generally have business profiles of 5 and 6;
- 3. Value Line's safety rank, or total common stock risk measure, is 1 or 2. Value Line recommends consideration of companies with a safety rank of 1 or 2 for conservative investors;
- 4. Value Line's beta, or risk measure for investors with 15 or more stocks in their portfolio, should not exceed 0.60;
- Standard & Poor's credit rating is A- or higher;

Florida Public Service Commission Docket No. 010949-El Witness: Charles A. Benore Exhibit No. \_\_\_(CAB-1) Schedule 6 Page 4 of 6

- 6. Industrial rates are under \$0.05 per kWh to avoid including companies with poor competitive positions;
- 7, 8, and 9. I also considered the debt to total capital ratio as a measure of financial risk; Value Line's regulatory assessment for regulatory risk, and company size as an additional measure of business risk.

Consideration was also given to the merger status of companies.

Since investors have likely discounted the merger prospects of virtually all electric companies, I do not believe that blanket elimination of just companies with announced mergers is appropriate. Nonetheless, Potomac Electric Power that is involved in a proposed merger with Conectiv was not used as a comparable company.

#### GULF POWER COMPANY'S COMPARABLE COMPANIES

Gulf Power Company's comparable companies are:

- Allegheny Energy, AYE
- 2. Alliant Energy, LNT
- Ameren Corp., AEE
- 4. Cinergy, CIN
- 5. FPL Group, FPL
- 6. Progress Energy, PGN
- 7. TECO Energy, TE
- 8. Wisconsin Energy, WEC

Supporting data is shown in Schedule 6, page 6.

Florida Public Service Commission Docket No. 010949-El Witness: Charles A. Benore Exhibit No. \_\_\_(CAB-1) Schedule 6 Page 5 of 6

# OVERALL ASSESSMENT OF RELATIVE RISK OF GULF POWER COMPANY VERSUS ITS COMPARABLE COMPANIES

Gulf Power has a lower S&P business profile than its comparable companies, derives a higher level of revenues from the electric business than for its comparable companies, has a lower debt ratio or financial risk, and a moderately higher regulatory rating than its comparable companies. On the other hand, Gulf Power is a much smaller company than its comparable companies, which increases business risk.

Overall, it is my judgment that Gulf Power Company's relative risk is moderately lower than its comparable companies, which will be recognized after assessing the results of all of the cost of common stock tests to determine the recommended return on common stock equity.

#### Risk Indicators for Gulf Power Company's Comparable Companies and Southern Company

	1	2	3	4	5	6	7	8	9
	Predominately	S&P							
	Regulated	Business	VL Safety	VL.	S&P Bond	Competitive	Val Line	Debt to	Mkt. Cap.
Company	Company	Profile	Rank	Beta	Rating	Position	Regulation	Capital %	\$ Bil
Allegheny Energy, AYE *	Yes	5	1.0	0.55	A+	Under \$0.05 kWh	Avg.	57.0%	6.5
Alliant Energy, LNT	Yes	5	2.0	0.55	A+	Under \$0.05 kWh	Avg.	51.0%	2.3
Ameren Corp., AEE	Yes	5	1.0	0.55	A+	Under \$0.05 kWh	Avg.	46.0%	5.9
Cinergy Corp., CIN	Yes	5	2.0	0.55	Α-	Under \$0.05 kWh	Abv. Āvg.	49.0%	5.4
FPL Group, FPL	Yes	5	2.0	0.40	AA-	Under \$0.05 kWh	Abv. Avg.	39.0%	10.1
Progress Energy, PGN	Yes	5	1.0	NA	A+	Under \$0.05 kWh	Avg.	51.0%	8.6
TECO Energy, TE	Yes	5	1.0	0.50	AA	Under \$0.05 kWh	Abv. Avg.	48.0%	4.3
Wisconsin Energy, WEC*	Yes	4	2.0	0.50	AA-	Under \$0.05 kWh	Abv. Avg.	65.0%	2.8
Average	Yes	4.9	1.5	0.51	A+	Under \$0.05 kWh	Avg/AbvAvg	50.8%	5.7
Gulf Power Company	Yes	4	NA	NA	<b>A</b> +	Under \$0.05 kWh	Abv. Avg.	41.5%(b)	NA
Southern Company, SO	Yes	4	2.0	NA	A+(a)	Under \$0.05 kWh	Avg.	38.0%	15.8

- 1. Predominately an Electric Company Followed by Bloomberg, C.A.Turner, and Value Line
- 2. S&P Business Profile 4 or 5, where integrated companies are generally expected to be 5 or 6 on a 1 is best scale of 1-10
- 3. Value Line Safety Rank 1 or 2 on a scale of 1 to 5 where 1 is lowest risk: Value Line recommends 1 or 2 for conservative investors
- 4. Value Line Beta 0.60 or less
- 5. S&P Credit Rating A- or better, C.A.Turner
- 6. Industrial Rates Under \$0.05 as a Measure of Competitive Position
- 7. Value Line Regulation Ranking
- 8. Debt Ratio, Value Line, or 2001 Long-Term debt as a Percent of Total Capital
- 9. Market Value of Common Stock
- 10. Mergers were also considered; Potomac Electric Power was excluded because of proposed merger with Conectiv
- \* Allegheny and Wisconsin Energy were excluded because of non-representative results, and as a result, the DCF and other tests are based on a truncated average.

NA: Not Available (a) Simple Average of Five Electric Subsidiaries--weighted by size A; (b) 2000 SO 10K Sources: S&P July 9, 2001 Investors & Perspectives, C.A.Turner July 2000; Value Line Reports July 6, 2001 and June 8, 2001 Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) GULF POWER COMPANY

lorida Public Service Commission ocket No. 010949-El

Florida Public Service Commission Docket No. 010949-EI GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 7 Page 1 of 17

## STANDARD AND TRANSFORMED DCF MODEL RESULTS FOR GULF POWER COMPANY

STANDARD, P/B = 1.0(Price to Book Ratio = 1.0), DCF MODEL DESCRIPTION

The standard DCF model is based on the present value theory of investment. In the annual version, the market price that an investor is willing to pay today for a share of common stock is determined by 1) the cash flows that the investor expects to receive from the stock over the period it is held, and 2) the discount rate representing the return required for investing in the stock, or a return comparable to other common stocks of similar risk (also other common stocks or investments on a risk-adjusted basis). Cash flow consists of two parts: dividends and the final sale value of the stock. The discount rate is determined by investors' perceptions of alternate investment returns and the relative riskiness of expected cash flows.

#### Formula

The standard DCF model, which shows the investor-required-market return, can be expressed by the following equation: k = (DPS1/Po) + g. The DCF model states that the discount rate (investor-required-market-return), k, is equal to the sum of: 1) the expected dividend in the first holding period, DPS1, divided by a representative market price, Po; plus 2) the expected compounded growth

Florida Public Service Commission

Docket No. 010949-El

**GULF POWER COMPANY** 

Witness: Charles A. Benore

Exhibit No.\_\_\_(CAB-1)

Schedule 7

Page 2 of 17

rate of dividends, g. The model infers "k" from the observed dividend yield plus

the investor-expected growth rate. Essentially, the required-market-return by

investors in an efficient market, and before an adjustment for flotation costs, is

the sum of the yield on the stock and the expected growth rate in

eamings/dividends.

Book Versus Market Returns

It is important to note that the investor-required- market-return shown by the

standard DCF model is seldom the same, as the book-regulatory-return the firm

must earn to satisfy investor-market-return requirements. When the price-to-

book value ratio is less than 1.0, the firm's necessary return on common stock

equity is below the investor-required-market-return, and vice versa when stocks

are selling above book value, as they now are.

DETERMINATION OF THE DCF MODEL YIELD

Since the dividend yield is derived by dividing the expected dividend for the

first holding year of the stock by a representative price, there are two issues: (1)

a representative price of the comparable stocks, and (2) the amount of the

dividend to be received by investors for the first holding year.

For a representative price, the efficient market theory shows that investors

Florida Public Service Commission Docket No. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 7

Page 3 of 17

reflect new information into stock prices soon after such information is available to them. Therefore, current prices, or prices for the very recent past, are generally the best prices to use. Care should be taken, however, to recognize abnormal trading in the markets.

#### Stock Prices Used to Determine Yield

To determine a representative price, I used prices for about one month, or from July 16, 2001, through August 14, 2001. The use of this time period avoids reliance on a spot price, and generally provides sufficient time for market imbalances in supply and demand to even out. Price data for Gulf Power Company's comparable companies are shown on page 13 of this Schedule.

#### Dividend for First Holding Year

For the investors' first holding year dividend, the dividend to be received was determined by increasing the current dividend by the applicable growth rate (derived in the next section of this test) at the normal, dividend change, timing pattern for the comparable companies. Where the dividend had not been increased on a regular annual basis, and four quarters or more of time passed without a dividend increase, the dividend was increased in the third quarter of 2001. Supporting data are shown on page 14 of this Schedule.

Florida Public Service Commission
Docket No. 010949-EI
GULF POWER COMPANY
Witness: Charles A. Benore
Exhibit No.\_\_\_(CAB-1)
Schedule 7
Page 4 of 17

#### DETERMINATION OF THE DCF MODEL GROWTH RATE

Important decision issues for determining the growth rate used in the DCF model are whether investors rely on historical growth as well as projected growth rates, and whether investors use earnings growth rates as well as dividend growth rates. The source of growth projections is also a decision issue.

Because investors look forward to determine prospective returns and investment attractiveness, projected growth rates along with judgment should be used to determine the growth component of the DCF model.

This is especially so given the distortions to historical data associated with regulatory restructuring of the electric power industry. In the most severe example, two electric power companies are faced with bankruptcy during the regulatory restructuring transition; some companies have, or have been invited to merge with others; investment write-downs or write-offs of unrecoverable stranded costs are occurring; company business models are changing to adapt to a competitive environment: dividends are being reduced or held constant to adjust to rising business risk; asset sales and capital structure changes are occurring, and the like.

These developments strongly indicate that knowledgeable investors will rely on projected instead of historical data. Therefore, short-term historical data

Florida Public Service Commission Docket No. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 7 Page 5 of 17

no longer serves as a reasonable guide to investor growth expectations.

Consequently, determination of the investor-required-market-return should rely on projected growth rates. However, projected dividend growth rates are an exception to the rule at this time.

The DCF model, of course, specifies that dividends be used. However, a fundamental change from a regulated monopoly to a competitive business is occurring, which is increasing risk for electric companies. Accordingly, many companies have changed their dividend policies to lower payouts to counter higher anticipated business risk. For example, 37 electric companies have reduced their dividend rate since 1992. Therefore, dividend growth does not serve as a reliable guide to prospective price growth at this time.

As another example, Value Line notes in its April 7, 2000 commentary:

A New Dividend Game Plan

Five years ago, almost all utilities we follow were hiking the disbursement annually. Yearly increases were averaging 3 percent - 4 percent, and thanks to periodic rate increases, payout ratios remained at a reasonable level. But as the pressure of competition spread, companies were faced with potentially large stranded costs, rate reductions, and lower earnings. Regulatory

Florida Public Service Commission Docket No. 010949-EI GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 7 Page 6 of 17

uncertainties induced directors to seek lower payout ratios. Many raised the payout by lesser amounts than before. Some maintained a level dividend for more than one year. Our analysis of the 78 utilities we follow indicates a dramatic change in dividend policy since 1995.

Further, earnings and dividend growth rates are interchangeable under certain assumptions, and from my experience investors often use earnings growth rates. Most services providing growth rates, in fact, provide only earnings growth rates.

Moreover, a survey of financial analysts by Stanley B. Block in "A Study of Financial Analysts: Practice and Theory," *Financial Analysts Journal*, July/August 1999, Page 88, notes that "only 3 of 297 respondents considered dividends to be the most important variable in valuing a security." However, 156 of the respondents indicated that earnings were the most important investment consideration with cash flow in second place.

Since projected dividend growth, at least during the transition from a monopoly to competitive status for electric companies, no longer provides a reasonable guide to prospective stock price growth, I believe investors will rely

Florida Public Service Commission Docket No. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 7 Page 7 of 17

on earnings growth rates. Therefore, I have chosen to use earnings growth rates for my DCF analysis.

#### **Growth Rate Sources**

Finally, there are several sources for growth rates. Value Line is one of the largest investment service firms, and its publications can be found in many libraries used by individual investors. Growth rates from First Call, I/B/E/S and Zacks were also used to determine investor-expected rates of growth. The investor-expected growth rates are shown on page 15 of this Schedule. The average projected growth rate for Gulf Power Company's comparable companies used for my truncated analysis is 6.0 percent. The average according to Zacks for the electric power industry is 10.0 percent.

# RESULTS OF THE STANDARD DCF MODEL TEST FOR DETERMINING GULF POWER COMPANY'S COST OF COMMON STOCK

As shown on page 16 of this Schedule, the standard DCF model investor-required-market return for Gulf Power Company's comparable companies is 11.7 percent. Including flotation costs, the cost is 11.9 percent. Flotation costs of 0.2 percent are also shown on the Schedule as the difference between the yield without and with a flotation cost adjustment of 3 percent.

Florida Public Service Commission Docket No. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 7 Page 8 of 17

CONCERNS ABOUT THE VALIDITY OF THE STANDARD (P/B = 1.0) DCF

MODEL INDICATED COST OF COMMON STOCK FOR GULF POWER

COMPANY

The results of the standard DCF model as conventionally used, I strongly believe, are wrong when used as the regulatory-allowed-return under current market conditions. This is because the regulatory return, which is a <u>book return</u>, will not produce the investor's required return, which is a <u>market return</u>, except when prices are comparable to book value. The distinction is crucial to note now that prices are materially different from book value.

Under current market conditions where prices materially exceed book value, use of the required-market-return by investors as the regulatory return will not produce sufficient earnings to achieve the investor expected growth rate and return. Therefore, the standard DCF model will not work for regulatory purposes at this time.

#### **Transformation**

To remedy this problem, it is useful to note that the cost of common stock, as stated by Petty, Keown, Scott and Martin in *Basic Financial Management*, Page 933, Sixth Edition, Prentice Hall, is:

Florida Public Service Commission Docket No. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 7 Page 9 of 17

Cost of Common Stock:

The rate of return the firm must earn in order for the common stockholders to receive their required rate of return.

Therefore it is necessary to allow a regulatory "book" return that will enable the firm to earn a return on its common stock equity that will produce the growth rate and "market" return required by investors.

This regulatory-allowed-return can easily be determined through an iterative process that shows the necessary return on common stock equity that provides investors a reasonable opportunity to earn their required return in the market.

The process is referred to as the Transformed DCF test in my testimony.

Transformation, therefore, is a necessary step to insure that Gulf Power Company can attract capital, and fulfill its customer responsibilities.

#### Investor Consequences Without Transformation

If the standard DCF model return of 11.7 percent for Gulf Power Company's comparable companies before flotation costs, based on the data used for the truncated average, is used as the regulatory return on common stock, the result would be a market return to investors of only 9.8 percent. Supporting data is shown in the upper table on page 17 of this Schedule.

Florida Public Service Commission Docket No. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 7 Page 10 of 17

Clearly, a 9.8 percent market return prospect would be very negative for investors since it is well below the required return of 11.7 and 11.9 percent before and after flotation costs. Consequently, there would be the prospect of large drop in the common stock price of Gulf Power Company's comparable companies to their book value, or by 27 percent. [truncated average price \$37.76, Schedule 7, page 16; and book value \$27.41, Schedule 10, page 6].

Since investors invest to make, not lose money, adopting the standard DCF model results, as the regulatory return, would surely drive investors away from Gulf Power Company as an investment, which would be contrary to the interests of its customers.

Consequently, use of market based model results, as the allowed regulatory return would create a strong incentive for investors to invest elsewhere to obtain their required return. This would be contrary to the interests of the Company's customers.

NECESSARY REGULATORY RETURN ON GULF POWER'S COMMON
STOCK IN ORDER FOR INVESTORS TO HAVE AN OPPORTUNITY TO EARN
THEIR REQUIRED MARKET RETURN

The necessary regulatory-allowed-return on Gulf Power Company's common

Florida Public Service Commission Docket No. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 7 Page 11 of 17

stock equity in order for investors to have an opportunity to earn their required-market-return of 11.7 percent is 13.6 percent. Supporting data for the Transformed DCF model is shown in the lower table on page 17 of this Schedule.

REGULATORY CONFIRMATION OF THE NEED TO REDUCE RELIANCE ON THE STANDARD DCF MODEL AND OTHER MARKET BASED MODELS

Regulators generally appear to recognize the flaw in the standard DCF model when price-to-book value levels are materially above 1.0 times. For example, since price-to-book-value ratios have increased from about 1.0 times in recent years, regulators have allowed electric companies higher returns on common stock equity than indicated by the standard DCF model.

Regulatory allowed returns exceeded the earnings per share (EPS) version of the standard DCF model by 1 to 3 percentage points in recent years; 4 to 6 percentage points for the dividend per share (DPS) version; and 3 to 4 percentage points for both tests.

The earnings per share version of the standard DCF model results is based on Value Line's five-year projected earnings growth rates updated each year plus the dividend yield on a one-year forward dividend per share for 32 electric

Florida Public Service Commission Docket No. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 7 Page 12 of 17

companies that account for about 60 percent of the industry. The same method was followed for the dividends per share version of the model except for using projected dividend growth rates.

Supporting data appears on Schedule 5.

#### CAPITAL ATTRACTION CONSIDERATIONS

Schedule 5 clearly illustrates that regulatory allowed returns have exceeded the standard DCF model return when price to book ratios exceed 1.0. Consequently, investors would anticipate higher regulatory returns than indicated by market-based models.

Moreover, since several utilities have recently incurred capital attraction problems, it is crucial that Gulf Power be financially strong because of the indispensable nature of electric power service to its customers and future uncertainty.

Florida Public Service Commission
Docket NO. 010949-El
GULF POWER COMPANY
Witness: Charles A. Benore
Exhibit No.\_\_\_(CAB-1)
Schedule 7
Page 13 of 17

## Fiepresentative Prices for Gulf Power Company's Electric Utility Comparable Companies

	AYE	LNT	AEE	CIN	FPL	PGN	TE	WEC
7/16/01	48.35	29.26	40.85	33.55	58.39	44.46	30.25	23.03
7/17/01	47.70	29.12	40.35	33.31	57.51	43.89	30.41	22.95
7/18/01	47.72	29.01	40.03	33.50	57.74	43.20	30.30	22.70
7/19/01	47.40	28.84	40.44	33.15	58.63	42.75	30.06	22.48
7/20/01	44.76	28.45	39.67	32.10	57.01	41.65	29.80	22.19
7/23/01	42.65	28.05	38.60	30.84	54.85	40.39	28.66	21.53
7/24/01	40.59	28.14	37.70	30.29	53.02	40.09	27.93	21.12
7/25/01	42.50	28.54	38.65	30.80	55.10	41.20	28.14	21.55
7/26/01	43.85	29.00	39.29	30.67	54.75	41.73	28.05	21.54
7/27/01	43.77	28.35	39.13	30.50	54.35	41.93	28.10	21.64
7/30/01	43.45	28.72	39.29	30.50	55.14	42.68	28.12	21.88
7/31/01	43.12	28.57	39.29	30.90	54.00	42.77	28.57	22.14
8/1/01	43.48	28.75	39.73	31.04	54.00	43.72	28.81	22.54
8/2/01	44.55	28.9 <del>6</del>	40.22	31.40	54.35	44.32	29.03	23.03
8/3/01	44.78	28.87	40.40	32.00	54.98	44.40	29.64	23.36
8/6/01	43.18	28.36	39.52	30.92	53.85	43.57	28.80	22.93
8/7/01	43.82	28.71	39.66	31.15	54.46	42.90	29.27	23.23
8/8/01	43.05	28.85	39.11	31.00	53.85	42,16	28.85	22.79
8/9/01	43.74	29.10	39.58	30.95	53.50	42.48	28.96	23.03
8/10/01	44.07	29.55	39.96	31.75	53.40	42.71	29.21	23.04
8/13/01	43.24	29.35	39.65	31.74	53.40	42.21	28.94	22.95
8/14/01	42.87	29.26	39.70	32.10	53.50	41.16	28.93	23,05
_	44.21	28.81	39.58	31.55	54.99	42,56	29.04	22.49

Source: Yahoo! Historical Stock Prices

Florida Public Service Commission Docket NO. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 7 Page 14 of 17

## Projected First Year Dividend for Gulf Power Company's Companable Companies

Company	Q3,01	Q4,01	Q1,02	Q2,02	DPS1	Growth Rate
	\$	\$	\$	\$	\$	%
Allegheny Energy, AYE	0.4743	0.4743	0.4743	0.4743	1.90	10.3%
Alliant Energy, LNT	0.5175	0.5175	0.5175	0.5175	2.07	3.5%
Ameren Corp., AEE	0.6642	0.6642	0.6642	0.6642	2.66	4.6%
Cinergy Corp., CIN	0.4779	0.4779	0.4779	0.4779	1.91	6.2%
FPL Group, FPL	0.5600	0.5600	0.5958	0.5958	2.31	6.4%
Progress Energy, PGN	0.5300	0.5300	0.5671	0.5671	2.19	7.0%
TECO Energy, TE	0.3450	0.3450	0.3450	0.3736	1.41	8.3%
Wisconsin Energy, WEC	0.2000	0.2110	0,2110	0.2110	0.83	5.5%
Average				_	1.91	6.5%

Sources: Wall Street Journal and Value Line along with Schedule 7, Page 15

Florida Public Service Commission Docket NO. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 7 Page 15 of 17

## Projected Growth Rates for Gulf Power Company's Comparable Companies

Company	Value Line Proj 5 Yr EPS Gwth	Projected iBES Growth	Projected Zacks Growth	Projected First Call Growth	Average Proj'ed Gwth
Allegheny Energy, AYE	13.0%	9.3%	9.0%	10.0%	10.3%
Alliant Energy, LNT	6.5%	3,5%	2.0%	2.0%	3.5%
Ameren Corp., AEE	4.5%	4.0%	4.8%	5.0%	4.6%
Cinergy Corp., CIN	6.0%	5.7%	5.9%	7.0%	6.2%
FPL Group, FPL	4.5%	6.8%	7.3%	7.0%	6.4%
Progress Energy, PGN	NA	6.7%	7.4%	7.0%	7.0%
TECO Energy, TE	7.0%	8.0%	9.2%	9.0%	8.3%
Wisconsin Energy, WEC	8.5%	5.3%	4.2%	4.0%_	5.5%
Average	7.1%	6.2%	6.2%	6.4%	6.5%

Sources: Value Line; Bloomberg, Zacks Investment Research, and First Call

Florida Public Service Commission Docket NO. 010949-E1 GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 7 Page 16 of 17

### Standard, or P/B = 1.0, DCF Investor Required Market Return for Gulf Power Company's Comparable Companies

Company	DP\$1(\$)	Price (\$)	Yleid	Yid with 3% Flo. Costs	Proj. Gwth_	DCF w/o FloC	DCF w Flo C
Allegheny Energy, AYE	1.90	44.21	4.30%	4.43%	10.3%	14.6%	14.73%
Alliant Energy, LNT	2.07	28.81	7.19%	7.40%	3.5%	10.7%	10.90%
Ameren Corp., AEE	2.66	39.58	6.72%	6.92%	4.6%	11.3%	11.52%
Cinergy Corp., CIN	1.91	31.55	6.05%	6.24%	6.2%	12.3%	12.44%
FPL Group, FPL	2.31	54.99	4.20%	4.33%	6.4%	10.6%	10.73%
Progress Energy, PGN	2.19	42.56	5,15%	5.30%	7.0%	12.1%	12.30%
TECO Energy, TE	1.41	29.04	4.86%	5.00%	8.3%	13.2%	13.30%
Wisconsin Energy, WEC	0.83	22.49	3.69%	3.80%	5.5%	9.2%	9.30%
Average	1,91	36,65	5.27%	5.43%	6.5%	11.7%	11.9%

#### **Flotation Costs**

·	Gult Pw.
	Comps.
Yield with Flotation Costs	5.43%
Yield without Flotation Costs	5.27%
Flotation Costs	0.16%

## Standard, or P/B = 1.0, Truncated DCF Investor Required Market Return for Gulf Power Company's Comparable Companies

Company_	DP\$1(\$)	Price (\$)	Yield	3% Flo. Costs	Proj. Gwth	DCF w/o FloC	DCF w Flo C
Alliant Energy, LNT	2.07	28.81	7.19%	7.41%	3.5%	10.7%	10.9%
Ameren Corp., AEE	2.66	39.58	6.72%	6.93%	4.6%	11.3%	11.5%
Cinergy Corp., CIN	1.91	31.55	6.05%	6.24%	6.2%	12.3%	12.4%
FPL Group, FPL	2.31	54. <del>99</del>	4.20%	4.33%	6.4%	10.6%	10.7%
Progress Energy, PGN	2.19	42.56	5.15%	5.30%	7.0%	12.1%	12.3%
TECO Energy, TE	1.41	29.04	4.86%	5.01%	8.3%	13.2%	13.3%
Average	2.09	37.76	5.69%	5.87%	6.0%	11.7%	11.9%

#### Flotation Costs

	Gur Pw.
	Comps
Yield with Flotation Costs	5.87%
Yield without Flotation Costs	5.69%
Flotation Costs	0.18%

Sources: Previous Schedule 7 Exhibits

Florida Public Service Commission Docket No. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 7 Page 17 of 17

#### Transformed DCF Test for Gulf Power Company's Comparable Companies (a)

	Gulf Pw.
Standard DCF Model Results:	Comp. Co's
Book Value	<u>27.41</u>
Regulatory Return	11.7%
Earnings Per Share	3.21
Dividend Per Share	\$ 2.09
Dividend Payout Ratio	65.26%
Retention Rate	34.74%
Sustainable Growth Rate	4.06%
Current Yield	<u>5,69%</u>
Market Return to Investors	9.8%

Necessary Hegulatory Heturn on	
Common Stock for investors to	Gulf Pw.
Earn Required Market Return:	Comp. Co's
Book Value	<u> 27.41</u>
Regulatory Return	13.6%
Earnings Per Share	3.73
Dividend Per Share	\$ 2.09
Dividend Payout Ratio	56.11%
Retention Rate	43.89%
Sustainable Growth Rate	5.97%
Current Yield	5.69%_
Market Return to Investors	11.7%

(a) Excludes flotation costs

Florida Public Service Commission Docket No. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 8 Page 1 of 14

# Gulf Power Company Equity Risk Premium (ERP) Analysis

#### EQUITY RISK PREMIUM (ERP), P/B = 1.0, MODEL DESCRIPTION

The <u>Permian Basin</u> U. S. Supreme Court decision requires that investors have an opportunity to be compensated for the risks assumed. In the equity-risk-premium model, the required return is the sum of the lowest risk, long-term debt rate of return, or the return on long-term U.S. Treasury bonds, plus the equity risk premium. The equity risk premium represents the higher reward necessary to compensate investors for the higher risk in Gulf Power Company's comparable company stocks than long-term Treasury bonds.

#### Formula

The formula when the price-to-book value ratio is 1.0 follows: k = bond yield + ERP, or the Investor Required Market Return, k, is equal to the Treasury Bond Yield plus the Equity Risk Premium.

#### USE OF LONG-TERM VERSUS SHORT-TERM TREASURY BOND YIELD

Long-term Treasury bonds are used for the bond yield because they represent the cost of lowest risk, long-term capital due to their virtual absence of risk of nonpayment of principal and interest. As to short-term or long-term Treasury yields, long-term should be used. There are three reasons. First, the Federal Reserve exerts greater control over short-term than long-term rates, and therefore, long-term rates better reflect investor expectations. Second, common stocks have a perpetuity term, and therefore, it is necessary to use the long-term Treasury bond to best reflect duration risk. Third, the yield on short-term Treasury bills is more volatile than long-term yields, and therefore, may be less representative of investor expectations than long-term yields.

Florida Public Service Commission Docket No. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 8 Page 2 of 14

Long-term rates, therefore, best represent investor expectations for the Equity Risk Premium model.

# DETERMINATION OF THE EQUITY RISK PREMIUM, OR HIGHER RETURN TO COMPENSATE STOCK INVESTORS FOR THE HIGHER RISK IN COMMON STOCKS THAN BONDS

Actual, annual returns realized by investors in the common stocks for Moody's Electric Power Companies and long-term Treasury bonds were used to determine the equity risk premium, or the difference between the two returns. The time period covered was 1932-93, or for as far back as data was provided by the most recent *Moody's Public Utility Manual*. The terminal year was 1993, or the year when investors began to discount the onset of the change from a regulated monopoly to competition, which was an unprecedented, structural change for the industry, and distorted subsequent data during the ongoing transition.

Long-term historical data beginning in 1932 was used because of the inclusion of many event types and greater probability of reflecting investment scenarios considered by investors in making investment decisions. Short-term data may include only one, or a few event types, and be less representative of investor expectations. Please see confirmation by libbotson. Associates of the use of long-term historical data in Schedule 9 on pages 5 -7.

The sum of the percentage price change and yield represents the total return realized by investors for Moody's Electric Power Companies. Although these are realized versus expected returns, one would reasonably expect that over and under-realized returns relative to expectations would even out over a long period of time.

Florida Public Service Commission Docket No. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 8 Page 3 of 14

The stock returns were then compared with returns for long-term U.S.

Treasury bonds as calculated by Ibbotson Associates. The difference between the stock and bond returns shows the higher return required by investors for investing in Moody's Electric Stocks than in the lower risk, long-term U.S.

Treasury bond, or the equity risk premium.

Some years ago, I used the equity risk premium for the last two economic cycles in my testimony. However, short-term historical data is no longer useful for replicating investor expectations because of distortions during the industry's transition from a monopoly to competitive business.

# EQUITY RISK PREMIUM RESULTS FOR MOODY'S ELECTRIC POWER COMPANIES

The equity risk premium for 1932-1993 averaged 5.0-percentage points. Supporting data is shown in Pages 8 and 9 of this Schedule.

#### YIELD FOR LONG-TERM U.S. TREASURY BONDS

The yield for long-term Treasury bonds has recently been biased downward by the announced buyback of Treasury bonds by the U. S. Government, and the prospect that the entire Treasury debt could be substantially reduced over the next decade. The reduction of new supply along with increased demand for the bonds has reduced yields below normal levels.

On the impact of the buybacks, Federal Reserve Chairman Greenspan noted in his February 17, 2000 Humphrey-Hawkins report that:

In recent weeks, long-term Treasury yields have retraced a good portion of that rise on expectations of reduced supply stemming from the Treasury's new buyback program and reductions in the amount of bonds to be

Florida Public Service Commission Docket No. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 8 Page 4 of 14

auctioned. This rally has been mostly confined to the long end of the Treasury market; long-term corporate bond yields have fallen only slightly, and yields are largely unchanged or have risen a little further at maturities of ten years or less, where most private borrowing is concentrated.

Further, an April 2000, study by the Federal Reserve Bank of St. Louis, in "Monetary Trends", page 1, notes:

The divergence of TIPS [Treasury Inflation Protected Securities] and conventional security yields across securities of different maturity suggests that the recent behavior of government security prices, especially the price of the 30-year bond, has not been dominated by changes in inflation expectations. Thus, while bond yields in general reflect market expectations about inflation and economic activity, they also can-at least in the short run-reflect purely idiosyncratic changes in market demand or supply.

Further confirmation is provided by an April 26, 2000 Wall Street Journal article on the Credit Markets on page C22 that states:

Recently, the 30 year issue has traded much more strongly than other maturities because of expectations that the Treasury's continuing program of trimming debt will result in fewer 30-year securities outstanding.

More recently, the March 26, 2001 Wall Street Journal on page C17 noted:

Florida Public Service Commission Docket No. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 8 Page 5 of 14

Analysts say it's difficult to get very bearish on Treasuries, given government debt buybacks, the likelihood of further Fed rate-cutting and the tendency of investors to seek safety in U.S.

Treasuries as other economies falter.

Clearly, investors have increased demand for Treasury notes and bonds beyond normal levels, which has reduced their yields. Recently, it has been reported that the Treasury Department is considering eliminating issuance of 30 year-year Treasury bonds. Consequently, it is necessary through spread analysis to adjust the yield on long-term Treasury bonds to normal levels.

#### DETERMINATION OF NORMAL YIELD ON 30 YEAR TREASURY BONDS

To determine the normalized yield for 30-year Treasury bonds, I used the average spread between Moody's "Aaa" rated corporate bonds and long-term Treasury bonds for 1926 through 1999, or beginning with the same year as used by Ibbotson Associates for their studies of bond and stock returns and ending in the year immediately preceding the buyback announcement.

The average spread for that time was 64 basis points, or 0.64 percent. Therefore, the normal yield on long-term Treasury bonds is the yield for Moody's "Aaa" corporate bonds less 0.64 percent. Confirmation of the reasonableness of the 0.64 percent spread is shown by the pre-buyback spread for the most recent five and ten years which averaged 0.71 percent and 0.67 percent respectively. Supporting data is shown on pages 10 and 11 of this Schedule.

#### Yield Used in ERP Arialysis

The average yield for Moody's Aaa Corporates for July 16, 2001 through August 14, 2001 was 7.08 percent. The 7.08 percent yield less the normal spread of 0.64 percent shows a normal yield for long-term Treasury bonds of 6.44 percent. Supporting data appears on page 12 of this Schedule.

Florida Public Service Commission Docket No. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 8 Page 6 of 14

# INVESTOR REQUIRED MARKET RETURN USING THE EQUITY RISK PREMIUM TEST

The investor-required-market-return for Moody's Electric Power Companies is the sum of the bond yield plus the equity risk premium, or 6.4 percent plus 5.0 percent for a total of 11.4 percent before flotation costs, and 11.6 percent after flotation costs.

# RISK COMPARABILITY OF MOODY'S ELECTRIC POWER COMPANIES AND GULF POWER COMPANY

Broad risk indicators, or the S&P bond rating, Value Line's Safety Rank and Beta, and electric revenues to total revenues show on balance that risk is moderately higher for Moody's Electric Power Companies than for Gulf Power Company's comparable companies. Supporting data is shown on page 13 of this Schedule.

#### **EQUITY RISK PREMIUM CONCLUSION**

Although risk is moderately lower for Gulf Power Company's comparable companies than for Moody's Electric group, the CAPM test that follows as Schedule 9, page 15 shows that the projected equity risk premium for Gulf Power Company's comparable companies based on the standard CAPM is much higher at 5.1 percent than the historical equity risk premium of 3.9 percent.

Since: 1. projected data is preferred for determining investor expectations, and the CAPM analysis shows a much higher projected than historical equity risk premium, and 2. beta likely understates risk for electric companies; the 5.0 percent equity risk premium using Moody's Electric Power Companies is reasonable for Gulf Power Company's comparable companies in my judgment.

Florida Public Service Commission Docket No. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 8 Page 7 of 14

Accordingly, the equity risk premium of 5.0 percent plus the normalized yield on long-term Treasury bonds of 6.4 percent indicates an expected market return by investors of 11.4 percent and 11.6 percent before and after flotation costs.

TRANSFORMATION, OR DETERMINING THE NECESSARY REGULATORY
RETURN SO THAT INVESTORS HAVE AN OPPORTUNITY TO EARN THE
11.4 PERCENT REQUIRED MARKET RETURN FOR GULF POWER
COMPANY

The necessary regulatory return in order for investors to have an opportunity to earn their required market return of 11.4 percent before flotation costs is 13.3 percent, as shown on page 14 of this Schedule for Gulf Power Company's comparable companies.

Florida Public Service Commission Docket No. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 8 Page 8 of 14

# Moody's Electric Companies' Total Return and Equity Risk Premium Relative to Long-Term U.S. Treasury Bonds

	Moody's	Moody's	Moody's	Moody's	Moody's	LongTerm	Equity
	Closing	Average	Current	Price	Total	T-Bond	Risk
<u>-</u>	Price	DPS	Yield	Change	Return	Return	Premium
1993	146.70	8.99	6.4%	4.0%	10.4%	18.2%	-7.9%
1992	141.06	9.05	6.3%	-2.1%	4.2%	8.1%	-3.8%
1991	144.02	8.95	7.6%	22.3%	29.9%	19.3%	10.6%
1990	117.77	8.79	7.2%	-3.9%	3.3%	6.2%	-2.9%
1989	122.52	8.82	8.7%	21.4%	30.1%	18.1%	12.0%
1988	100.94	8.87	9.4%	7.1%	16.5%	9.7%	6.9%
1987	94.24	9.12	8.0%	-17.1%	-9.1%	-2.7%	-6.4%
1986	113.66	8.89	9.4%	19.7%	29.0%	24.5%	4.5%
1985	94.98	8.61	10.7%	18.5%	29.2%	31.0%	-1.7%
1984	80.16	8.26	11.5%	11.3%	22.8%	15.5%	7.3%
1983	72.03	7.87	11.2%	2.5%	13.7%	0.7%	13.1%
1982	70.26	7.43	13.0%	22.8%	35.8%	40.4%	-4.5%
1981	57.20	6.99	12.8%	5.1%	18.0%	1.9%	16.1%
1980	54.42	6.58	11.7%	-3.5%	8.1%	-4.0%	12.1%
1979	56.41	6.22	10.4%	<b>-</b> 5.6%	4.8%	-1.2%	6.1%
1978	59.75	5.81	8.5%	-12.4%	-3.9%	-1.2%	-2.7%
1977	68.19	5.54	8.4%	2.9%	11.2%	-0.7%	11.9%
1976	66.29	5.18	9.3%	19.1%	28.4%	16.8%	11.7%
1975	55.66	4.97	12.1%	35.2%	47.3%	9.2%	38.1%
1974	41.17	4.83	7.9%	-32.4%	-24.4%	4.4%	-28.8%
1973	60.87	5.01	6.0%	-27.2%	-21.2%	-1.1%	-20.1%
1972	83.61	4.87	5.7%	-2.3%	3.4%	5.7%	-2.3%
1971	85.56	4.77	5.4%	-3.4%	2.0%	13.2%	-11.3%
1970	88.59	4.70	5.6%	4.7%	10.2%	12.1%	-1.9%
1969	84.62	4.61	4.4%	-18.7%	-14.2%	-5.1%	- <del>9</del> .2%
1968	104.04	4.50	4.6%	6.0%	10.5%	-0.3%	10.8%
1967	98.19	4.34	4.1%	-7.4%	-3.3%	-9.2%	5.9%
1966	105.99	4,11	3.6%	-7.7%	-4.1%	3.7%	-7.8%
1965	114.86	3.86	3.3%	-0.6%	2.8%	0.7%	2.0%
1964	115.54	3.43	3.4%	12.9%	16.3%	3.5%	12.8%
1963	102.31	3.21	3.3%	6.0%	9.4%	1.2%	8.1%
1962	96.49	2.97	3.0%	-2.8%	0.1%	6.9%	-6.7%
1961	99.32	2.81	3.7%	29.3%	32.9%	1.0%	32.0%
1960	76.82	2.68	4.1%	16.8%	20.9%	13.8%	7.1%
1959	65.77	2.61	3.9%	-0.9%	3.0%	-2.3%	5.3%
1958	66.37	2.50	5.0%	31.9%	36.9%	-6.1%	43.0%
1957	50.30	2.43	5.0%	2.7%	7.7%	7.5%	0.2%
1956	48.96	2.32	4.7%	-0.8%	3.9%	-5.6%	9.5%
1955	49.35	2.21	4.6%	3.8%	8.4%	-1.3%	9.7%

Florida Public Service Commission Docket No. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 8 Page 9 of 14

# Moody's Electric Companies' Total Return and Equity Risk Premium Relative to Long-Term U.S. Treasury Bonds

	Moody's	Moody's	Moody's	Moody's	Moody's	LongTerm	Equity	
	Closing	Average	Current	Price	Total	T-Bond	Risk	
	Price	DPS	Yield	Change	Return	Return	Premium	
1954	47.56	2.13	5.4%	20.1%	25.4%	7.2%	18.2%	
1953	39.61	2.01	5.3%	4.6%	10.0%	3.6%	6.4%	
1952	37.85	1.91	5.6%	11.8%	17.5%	1.2%	16.3%	
1951	33.85	1.88	6.1%	9.9%	16.0%	<b>-3.9%</b>	19.9%	
1950	30.81	1.76	5.8%	0.8%	6.5%	0.1%	6.5%	
1949	30.57	1.66	6.3%	16.7%	23.0%	6.5%	16.6%	
1948	26.20	1.60	6.3%	2.3%	8.6%	3.4%	5.2%	
1947	25.60	1.56	4.8%	-21.7%	-17.0%	-2.6%	-14.3%	
1946	32.71	1.43	4.6%	5.0%	9.6%	-0.1%	9.7%	
1945	31.14	1.30	6.2%	47.7%	53.8%	10.7%	43.1%	
1944	21.09	1.31	6.2%	0.4%	6.6%	2.8%	3.8%	
1943	21.01	1.28	9.0%	47.0%	56.0%	2.1%	53.9%	
1942	14.29	1.26	9.4%	6.2%	15.6%	3.2%	12.4%	
1941	13.45	1.44	6.5%	-39.5%	-33.0%	0.9%	-33.9%	
1940	22.22	1.54	5.3%	-23.0%	-17.6%	6.1%	-23.7%	
1939	28.85	1.48	5.4%	4.7%	10.1%	5.9%	4,2%	
1938	27.55	1.50	6.2%	13.7%	19.8%	5.5%	14.3%	
1937	24.24	1.74	4.2%	-41.7%	-37.5%	0.2%	-37.8%	
1936	41.60	1.48	4.1%	15.4%	19.5%	7.5%	11.9%	
1935	36.06	1.32	6.3%	71.2%	77.5%	5.0%	72.5%	
1934	21.06	1.60	5.6%	-26.7%	-21.1%	10.0%	-31.2%	
1933	28.73	1.95	4.9%	-27.1%	-22.2%	-0.1%	-22.1%	
1932	39.42	2.63	6.1%	-8.8%	-2.7%	16.8%	-19.6%	
1931	43.23	3.47						

Average 1932-93 5.0%

Source: Moody's and Ibbotson Associates

Florida Public Service Commission Docket No. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No. \_\_\_\_(CAB-1) Schedule 8 Page 10 of 14

# Interest Rates for Long-Term U.S. Treasury Bonds, Moody's Aaa Corporates, and Difference or Yield Spread

		Moody's	
	Long-Term	Aaa	Yield
	Treasuries	Corporates	Spread
	_		
1999	6.82%	7.55%	0.73%
1998	5.42%	6.22%	0.80%
1997	6.02%	6.76%	0.74%
1996	6.73%	7.20%	0.47%
1995	6.03%	6.82%	0.79%
1994	7.99%	8.46%	0.47%
1993	6.54%	6.93%	0.39%
1992	7.26%	7.98%	0.72%
1991	7.30%	8.31%	1.01%
1990	8.44%	9.05%	0.61%
1989	8.16%	8.86%	0.70%
1988	9.18%	9.57%	0.39%
1987	9.20%	10.11%	0.91%
1986	7.89%	8.49%	0.60%
1985	9.56%	10.16%	0.60%
1984	11.70%	12.13%	0.43%
1983	11.97%	12.57%	0.60%
1982	10.95%	11.83%	0.88%
1981	13.34%	14.23%	0.89%
1980	11.99%	13.21%	1.22%
1979	10.12%	10.74%	0.62%
1978	8.98%	9.16%	0.18%
1977	8.03%	8.19%	0.16%
1976	7.21%	7.98%	0.77%
1975	8.05%	8.79%	0.74%
1974	7.60%	8.89%	1.29%
1973	7.26%	7.68%	0.42%
1972	5.99%	7.08%	1.09%
1971	5.97%	7.25%	1.28%
1970	6.48%	7.64%	1.16%
1969	6.87%	7.72%	0.85%
1968	5.98%	6.45%	0.47%
1967	5.56%	6.19%	0.63%
1966	4.55%	5.39%	0.84%
1965	4.50%	4.68%	0.18%
1964	4.23%	4.44%	0.21%
1963	4.17%	4.35%	0.18%
1962	3.95%	4.24%	0.29%
1961	4.15%	4.42%	0.27%
1960	3.80%	4.35%	0.55%
1959	4.47%	4.58%	0.11%
1958	3.82%	4.08%	0.26%
1957	3.23%	3.81%	0.58%

Florida Public Service Commission Docket No. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 8 Page 11 of 14

# Interest Rates for Long-Term U.S. Treasury Bonds, Moody's Aaa Corporates, and Difference or Yield Spread

		Moody's	
	Long-Term	Aaa	Yield
	Treasuries	Corporates	Spread
1956	3.45%	3.75%	0.30%
1955	2.95%	3.15%	0.20%
1954	2.72%	2.90%	0.18%
1953	2.74%	3.13%	0.39%
1952	2.79%	2.97%	0.18%
1951	2.69%	3.01%	0.32%
1950	2.24%	2.67%	0.43%
1949	2.09%	2.58%	0.49%
1948	2.37%	2.79%	0.42%
1947	2.43%	2.86%	0.43%
1946	2.12%	2.61%	0.49%
1945	1.99%	2.61%	0.62%
1944	2.46%	2.70%	0.24%
1943	2.48%	2.74%	0.26%
1942	2.46%	2.81%	0.35%
1941	2.04%	2.80%	0.76%
1940	1.94%	2.71%	0.77%
1939	2.26%	2.94%	0.68%
1938	2.52%	3.08%	0.56%
1937	2.73%	3.21%	0.48%
1936	2.55%	3.10%	0.55%
1935	2.76%	3.44%	0.68%
1934	2.93%	3.81%	0.88%
1933	3.36%	4.50%	1.14%
1932	3.15%	4.59%	1.44%
1931	4.07%	5.32%	1.25%
1930	3.30%	4.52%	1.22%
1929	3.40%	4.67%	1.27%
1928	3.40%	4.61%	1.21%
1927	3.16%	4.46%	1.30%
1926	3.54%	4.68%	1.14%
	Average		0.64%

NA Not Available

Source: Ibbotson 2000 Yearbook & Moody's

Florida Public Service Commission Docket NO. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 8 Page 12 of 14

# Representative Yield for Long-Term U. S. Treasury Bonds

	Moody's Aaa
Date	Corporates
7/16/01	7.11%
7/17/01	7.11%
7/18/01	7.07%
7/19/01	7.07%
7/20/01	7.08%
7/23/01	7.06%
7/24/01	7.05%
7/25/01	7.11%
7/26/01	7.12%
7/27/01	7.08%
7/30/01	7.05%
7/31/01	7.03%
8/1/01	7.06%
8/2/01	7.09%
8/3/01	7.11%
8/6/01	7.11%
8/7/01	7.12%
8/8/01	7.05%
8/9/01	7.06%
8/10/01	7.04%
8/13/01	7.04%
8/14/01	7.04%
Average	7.08%
Normalization Adj.	<u>-0.64%</u>
Norm. T-Bond Yield	6.44%

Source: St. Louis Federal Reserve, and Exhibit\_\_\_(CAB-8), Pages 11 and 12

Florida Public Service Commission Docket No. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 8 Page 13 of 14

# Broad Risk Measures for Moody's Electric Power Companies

	S&P Bond Rating	S&P Bond Rating Numerically	Value Line Safety Rank	Beta	Electric Revenues to Tot, Revs.
1 American Electric Power	A-	5	2	0.55	78%
2 Constellation Energy	AA-	2	2	0.50	52%
3 Carolina P&L (now Progress Energy)	A+	3	1	NA	86%
4 Central Hudson G&E (Now CH Energy)	Α	4	2	0.55	65%
5 ClNergy Corp	Α-	5	2	0.55	59%
6 CMP Group (now Energy East)	Α	4	2	0.60	58%
7 Consolidated Edison	Α	4	1	0.50	71%
8 DPL, Inc.	BBB+	6	2	0.60	71%
9 DTE Energy	A-	5	2	0.55	67%
10 Edison Int'i	(a)	(a)	(a)	(a)	(a)
11 First Energy	B <del>8</del> +	9	3	0.55	73%
12 Florida Progress (now Progress Energy)	(nov	v Progress End	ergy, s <del>ee</del> Ci	arolina	P&L)
13 Houston Industries (now Reliant Energy)	8BB+	6	2	0.55	15%
14 IDACorp	AA-	2	2	0.50	93%
15 IPALCO Ent. (now AES)	₿₿₿-	8	3	1.10	50%
16 New Century Energies (now Xcel Energy)	AA	1	2	NA	54%
17 OGE Energy	A+	3	2	0.45	40%
t8 PECO Energy (now Exelon)	Α-	5	2	NA	75%
19 PG&E Corp	(a)	(a)	(a)	(a)	(a)
20 Potomac Electric Power	Α	4	2	0.50	85%
21 PP&L Resources (Now PPL Corp.)	Α-	5	3	0.60	55%
22 Southern Company	A+(b)	3	2	NA	80%-90% (c)
23 TECO Energy	AA	1	1	0.50	57%
24 UNICOM Corp (now Exelon)		(now Exelon,			
Average	Α	4.3	2.0	0.57	64%
Gulf Power Company	<b>A</b> +	3	NA	NA	100%
Gulf Power Co's Comparable Companies	<b>A</b> +	3	1.5	0.51	69%

<sup>(</sup>a) Non-representative

<sup>(</sup>b) Average of electric operating subsidiaries

<sup>(</sup>c) 2001 Southern Company

NA Not Available

Florida Public Service Commission Docket No. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No. \_\_\_\_(CAB-1) Schedule 8 Page 14 of 14

# P/B=1.0 Equity Risk Premium Results for Gulf Power Company's Comparable Companies

Equity Risk Premium 5.0%
Long-term Interest Rates for Treasury Bonds 6.4%
P/B=1.0 ERP Investor Required Market Return 11.4%(a)

(a) Excludes Flotation Costs

# Transformed ERP Test for Gulf Power Company's Comparable Companies (a)

	G	ulf Pw.
Standard ERP Model Results	Col	mp. Coʻs
Book Value	\$	27.41
Regulatory Return		11.4%
Earnings Per Share	\$ 	3.12
Dividend Per Share	\$ \$	2.09
Dividend Payout		66.89%
Retention Rate		33.11%
Sustainable Growth Rate		3.78%
Current Yield		5.69%
Market Return to Investors		9.5%

Necessary Regulatory Return on Common Stock for Investors to Earn Regulred Market Return		ulf Pw. np. Co's
Book Value	\$ 	27.41
Regulatory Return		13.3%
EPS	\$	3.65
Dividend Per Share	\$ \$	2.09
Dividend Payout Ratio		57.33%
Retention Rate		42.67%
Sustainable Growth Rate		5.68%
Current Yield		5.69%
Market Return to Investors		11.4%

(a) Excludes flotation costs

Sources: Value Line, IBES, Zacks, and American Online

Florida Public Service Commission Docket No. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 9 Page 1 of 16

## **Gulf Power Company**

## Capital Asset Pricing Model (CAPM)

## STANDARD CAPM, P/B = 1.0, MODEL DESCRIPTION

The Capital Asset Pricing Model represents a portfolio approach to determining the investor required-market-return. Risk is divided into diversifiable and non-diversifiable risk. Diversifiable risk can be eliminated through proper diversification, or portfolio construction. Events that are good for one company can be bad for another. Therefore, risks specific to a given company can be offset (through proper portfolio construction and use of a sufficient number of companies) by another company with opposite risks, and company specific, or diversifiable risk, is eliminated.

The risk that cannot be eliminated through diversification is market risk, which is measured by beta. CAPM theory, therefore, indicates that risk is reflected by the beta. A common stock with a beta of 1.0 indicates that the stock will rise and fall with the market, while one with a beta of 0.75 will rise and fall by 75 percent of the change in the market.

### CAPM Diagram

The chart shown as Page 11 of this Schedule (which is adapted from a

Florida Public Service Commission Docket No. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 9

Page 2 of 16

chart in *Basic Financial Management*, Petty, Scott, Keown, and Martin, Sixth Edition, 1993, Prentice Hall) diagrams these relationships. Total risk, expressed as the standard deviation, and the required return, is shown on the vertical axis of the chart. The number of stocks held in the portfolio is shown on the horizontal axis.

As the number of stocks in the portfolio increases, diversifiable risk decreases, and with a sufficient number of stocks (a minimum of 15), diversifiable risk is eliminated. When eliminated, investors are left with only non-diversifiable risk, or market risk, which is measured by beta.

## STANDARD CAPM MODEL DESCRIPTION

The formula for the price-equals-book-value, standard CAPM model follows: k = Rb + B(Rm-Rb). Where: k is the investor required-market-return; Rb is the yield for the risk free investment, or the yield to maturity for the long-term U.S. Treasury bond (lowest risk return that best matches common stock duration); B is beta; and Rm is the expected market return.

It is important to note that the investor-required-market-return is seldom the same, as the book return the firm must earn to satisfy investor-market-return requirements. When the price-to-book value ratio is less than 1.0, the firm's necessary, regulatory return on common stock equity is below the investor-

Florida Public Service Commission Docket No. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 9 Page 3 of 16

required-market-return, and vice versa when stocks are selling above book value, as they now are.

EMPIRICAL CAPM, P/B = 1.0, MODEL JUSTIFICATION AND DESCRIPTION

Virtually all-empirical studies of standard CAPM model results show that it

understates the investor required market return for low beta stocks like Gulf

Power Company. Additionally, empirical research indicates that the standard

CAPM model understates expected market returns for small company stocks,

which would also include Gulf Power Company.

For example, Copeland and Weston In "Financial Theory and Corporate Policy," Third Edition, Addison Wesley Publishing Company, page 215, write:

With few exceptions, the empirical studies agree on the following conclusions: The intercept term, Yo, is significantly different from zero, and the slope, Y1, is less than the difference between the return on the market portfolio minus the risk-free rate. The implication is that low beta securities earn more than the CAPM would predict and high beta securities earn less.

As another example, Ibbotson, Kaplan, and Peterson in "Estimates of Small Stock Betas are Much Too Low," Ibbotson Associates, Page 7, July 19, 1996, note:

Florida Public Service Commission Docket No. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 9 Page 4 of 16

No commercial beta services provide estimates of systematic risk that account for the lagged response of small firms to market wide information. Our results indicate that beta estimates for small firms are severely biased downwards. Traditional beta estimates are unrelated to future returns.

Further, Roger Morin in "Regulatory Finance," Public Utilities Report Inc., Arlington, VA, 1994, page 334 states:

Whatever the explanation for the flatter than predicted SML, whether it be dividend yield, skewness, size, missing assets, or constrained borrowing effects, the general suggestion is that the empirical relationship between returns and betas should be estimated empirically rather than asserted on an a priori basis.

Morin established the empirical relationship between expected market returns and betas using regression analysis, which indicates that common stock returns and betas for 1926-84 are best represented by the following formula: Return = 0.0829 + 0.0520Beta. Using the empirical version of the CAPM, or K =  $R_F + x(R_M - R_F) + (1-x)B(R_M - R_F)$ , "The value of x that best explains the relationship noted above, is between 0.25 and 0.30." Using the lower end of the range, or 0.25, and correspondingly 0.75, the Empirical CAPM formula becomes: K =  $R_F + 0.25(R_M - R_F) + 0.75B(R_M - R_F)$ .

Florida Public Service Commission Docket No. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 9 Page 5 of 16

This version of the CAPM is referred to as the Morin Empirical CAPM in my analysis. It is my understanding that subsequent empirical investigation of the relationship between expected returns and betas is consistent with the Morin Empirical CAPM formula shown above.

# CAPM TESTS OF GULF POWER COMPANY'S INVESTOR REQUIRED-MARKET-RETURN

I employed the standard and Morin Empirical CAPMs to measure the CAPM investor expected market return for Gulf Power's comparable companies. For each of the two versions of the model, two-historical and two-projected investor expected returns were determined.

## Historical CAPMs

The historical market equity risk premiums employed in my analysis are from lbbotson Associates (2001 Yearbook, page 112). The first of two historical CAPMs uses the total return, market equity risk premium for 1926-2000 of 7.3 percent. The second uses the income equity risk premium of 7.8 percent for the same time period.

The justification for using a long period of time to measure the historical, market equity risk premium is provided by Ibbotson Associates ("1999 YEARBOOK," page 27). They state:

Florida Public Service Commission Docket No. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 9 Page 6 of 16

A long view of capital market history, exemplified by the 73-year period (1926-1998) examined here, uncovers the basic relationships between risk and return among the different asset classes, and between nominal and real (inflation-adjusted) returns. The goal of this study of asset returns is to provide a period long enough to include most or all of the major types of events that investors have experienced and may experience in the future. Such events include war and peace, growth and decline, bull and bear markets, and inflation and deflation, as well as less dramatic events that affect asset returns.

By studying the past, one can make inferences about the future. While the actual events that occurred in 1926-98 will not be repeated, the event-types (not specific events) of that period can be expected to recur. It is sometimes said that one period or another is unusual -- such as the crash of 1929-32 -- and World War II. This logic is suspicious because all periods are unusual. One of the most unusual events of the century -- the stock market crash of 1987 -- took place during the last decade; the equally remarkable inflation of the 1970s and early 1980s took place over the last two decades. From the perspective that historical event-

Florida Public Service Commission Docket No. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 9 Page 7 of 16

types tend to repeat themselves, a 73-year examination of past capital market returns reveals a great deal about what may be expected in the future.

Justification for use of the income return to determine the investor expected return is also provided by Ibbotson Associates ("1999 YEARBOOK," pages 154 and 155). They note:

When calculating the equity risk premium some analysts subtract a long-term Treasury bond's total return, rather than its income return, from the total return on the overall stock market. The income return is the better measure of return to be subtracted from the stock market total return for two reasons:

- It is the completely riskless portion of the issues' returns
   (Treasury securities are subject to price risk).
- Bond yields have risen historically, causing capital losses in fixed-income securities (including U.S. Treasury issues).
   These capital losses caused bonds' total returns to be lower than the returns which investors expected.

### Projected CAPMs

For the two projected CAPMs, I relied on the Value Line Composite and

Florida Public Service Commission Docket No. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 9 Page 8 of 16

the S&P 500 to measure the market return. For the growth component of the Value Line Composite total return, I used the earnings growth rate projected by Value Line for its universe of companies, and the current yield based on the expected dividend for the first holding year determined by Value Line. The projected growth rate for earnings is 14.8 percent, and the current yield on a forward dividend is 1.3 percent. Therefore, the indicated total return for the Value Line Composite is 16.1 percent.

For the S&P 500, I used the average of projected earnings per share growth by First Call, IBES, and Zacks, which was 15.4 percent. With a current yield on a 12-month forward dividend of 1.4 percent, the indicated S&P 500 total return, or investor required return, is 16.8 percent.

Supporting data for the growth rates and investor required returns are shown on page 12 of this Schedule. The average price and yield for the S&P 500 is shown on page 13 of this Schedule. For the 30-year Treasury bond yield, please refer to Schedule 8, page 12.

## Betas Used in CAPM Test

Value Line betas were used for this test, and averaged 0.51 for Gulf
Power Company's comparable companies. Supporting data is shown on
Schedule 9, page 14. In previous testimony, I adjusted the stated Value Line

Florida Public Service Commission Docket No. 010949-EI GULF POWER COMPANY

And the second s

Witness: Charles A. Benore

Exhibit No.\_\_\_(CAB-1)

Schedule 9 Page 9 of 16

betas. However, use of the Morin Empirical CAPM should obviate the need to

use an adjusted beta. Therefore, a CAPM analysis using an adjusted beta is not

part of my study for Gulf Power Company.

GULF POWER COMPANY'S STANDARD AND EMPIRICAL, P/B = 1.0, CAPM

HISTORICAL RESULTS

The standard version of the model showed an average investor required

return based on historical market equity risk premiums of 10.3 percent and 11.5

percent using projected data before flotation costs of 0.2 percent. The average

of the historical and projected CAPM results was 10.9 percent without and 11.1

percent with flotation costs.

For the Morin Empirical CAPM, the historical and projected CAPM

investor expected market returns were 11.2 percent and 12.8 percent with an

average of 12.0 percent before flotation costs of 0.2 percent. Supporting data is

shown on Schedule 9, page 15.

TRANSFORMED STANDARD AND EMPIRICAL CAPM RESULTS

The standard and empirical, P/B = 1.0, CAPMs show the investor

required-market-return. As indicated in my direct testimony, pages 12-16, the

investor required-market-return, when used as the regulatory return, can only be

achieved by investors when the price-to-book-value ratio is 1.0. With stocks

Florida Public Service Commission Docket No. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 9 Page 10 of 16

now trading well above 1.0 times book value, it is necessary to transform the investor required-market-return into the regulatory return necessary for investors to have an opportunity to earn their market-return-requirement indicated by the CAPM.

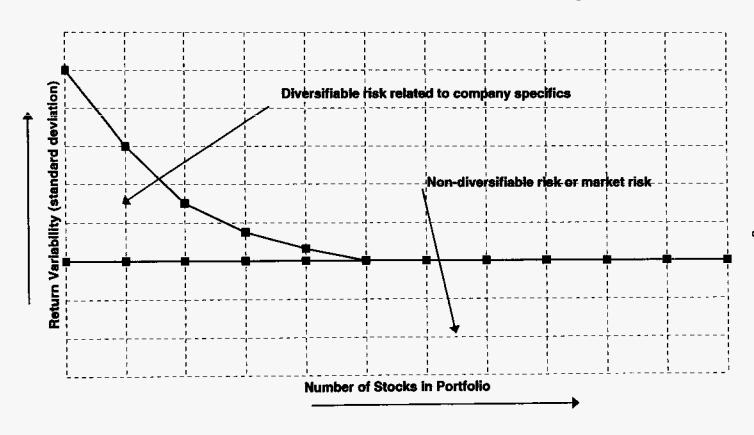
For Gulf Power Company, the average of the historical and projected results for the standard CAPM is 10.9 percent before flotation costs. For the Morin Empirical CAPM, the average of the historical and projected investor required market returns is 12.0 percent before flotation costs. Using the average of the standard and Morin Empirical CAPMs results in an investor expected market return of 11.4 percent.

In order for investors to have a reasonable opportunity to earn their required market return of 11.4 percent, the necessary regulatory return before flotation costs is 13.3 percent.

#### CONCLUSION

The average of the two versions of the CAPM shows a required market return by investors of 11.4 percent before flotation costs of 0.2 percent. To provide investors with a realistic opportunity to earn their required-market-return of 11.4 percent, it is necessary that Gulf Power Company's return on common stock equity, or its regulatory return, be 13.3 percent before flotation costs, as shown in the lower table on Schedule 9 page 16.

# Portfolio Size and Return Variability



Florida Public Service Commission
Docket No. 010949-El
GULF POWER COMPANY
Witness: Charles A. Bence
Exhibit No.\_\_\_(CAB-1)
Schedule 9
Page 11 of 16

Florida Public Service Commission Docket No. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 9 Page 12 of 16

17.5%

15.4%

1.4% 16.8%

# Investor Expected Market Returns for the Value Line Composite and S&P 500 Composite

### Value Line Composite

Growth Plus Yield:

Average

Value Line Projected EPS Growth Rate	14.8%
Current Yield on DPS1	1.3%
Required Return	16.1%
·	
S&P 500 Composite	
First Call Projected EPS Growth Rate	13.3%
IBES Projected EPS Growth Rate	15.3%

Zacks' Projected EPS Growth Rate

Current Yield on IDPS1

Required Return

Sources: Value Line, First Call, iBES, Zacks, and Standard & Poor's

Florida Public Service Commission Docket No. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 9 Page 13 of 16

# Representative Price and Yield for the Standard & Poor's 500

Date	Price
7/16/01	1202.45
7/17/01	1214.44
7/18/01	1207.52
7/19/01	1215.02
7/20/01	1210.85
7/23/01	1191.06
7/24/01	1171.65
7/25/01	1190.35
7/26/01	1203.11
7/27/01	1205.93
7/30/01	1204.53
7/31/01	1211.07
8/1/01	1216.04
8/2/01	1220.75
8/3/01	1214.35
8/6/01	1200.48
8/7/01	1204.40
8/8/01	1183.39
8/9/01	1183.33
8/10/01	1190.16
8/13/01	1191.29
8/14/01	1186.70
	1200.86

15.74
16.95
1200.86
1.41%

Sources: American Online, S&P

Florida Public Service Commission Docket No. 010949-EI GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 9 Page 14 of 16

# Value Line Betas for Gulf Power Company's Comparable Companies

Company	Gulf Pw. Comp Co's	Truncated Gulf Pw. Comp Co's
Allegheny Energy, AYE	0.55	
Alliant Energy, LNT	0.55	0.55
Ameren Corp., AEE	0.55	0.55
Cinergy Corp., CIN	0.55	0.55
FPL Group, FPL	0.40	0.40
Progress Energy, PGN	NA	NA
TECO Energy, TE	0.50	0.50
Wisconsin Energy, WEC	0.50	
Average	0.51	0.51

Source: Latest Value Line Reports

Florida Public Service Commission Docket No. 010949-Ei GULF POWER COMPANY Witness; Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 9 Page 15 of 16

# Standard and Empirical, P/B = 1.0, CAPM Cost of Common Stock for Gulf Power Company

dui ronai company		
	Standard	Emprical
	Gulf Pw.	Gulf Pw.
Long-Term Historical Tests	Comps	Comps
Ibbotson Long-Term Historical Total Return Premium	7.3%	7.3%
Beta	0.51	0.51
Equity Risk Premium	3.7%	3.7%
Empirical CAPM (.75* Gulf Pw. Comp's equity risk premium of 3.7%)		2.8%
Yield on 30 Year U.S. Treasury Bonds	6.4%	6.4%
Empirical CAPM (.25*market equity risk premium of 7.3%)		1.8%
Investor Required Market Return	10.1%	11.0%
Ibbotson Long-Term, Historical Yleid Risk Premium	7.8%	7.8%
Beta	0.51	0.51
Equity Risk Premium	4.0%	4.0%
Empirical CAPM (.75* Gulf Fw. Comp's equity risk premium of 4.0%)		3.0%
Yield on 30 Year U.S. Treasury Bonds	6.4%	6.4%
Empirical CAPM (.25*market equity risk premium of 7.8%)		2.0%
Investor Required Market Return	10.4%	11.3%
Projected Tests		
Value Line Indicated Total Return (Growth plus Yield)	16.1%	16.1%
Yield on 30 Year U.S. Treasury Bonds	6.4%	6.4%
Market Equity Risk Premium	9.7%	9.7%
Beta	0.61	0.51
Equity Risk Premium	4.9%	4.9%
Empirical CAPM (.75* Gulf Fw. Comp's equity risk premium of 4.9%)		3.7%
Yield on 30 Year U.S. Treasury Bonds	6.4%	6.4%
Empirical CAPM (.25*market equity risk premium of 9.7%)		2.4%
Investor Required Market Return	11.3%	12.5%
S&P 500 Indicated Total Relturn (Growth plus Yield)	16.8%	16.8%
Yield on 30 Year U.S. Treasury Bonds	6.4%	6.4%
Market Equity Risk Premium	10.4%	10.4%
Beta	0.51	0.51
Equity Risk Premium	5.3%	5.3%
Empirical CAPM (.75* Gulf Fw. Comp's equity risk premium of 5.3%)		4.0%
Yield on 30 Year U.S. Treasury Bonds	6.4%	6.4%
Empirical CAPM (.25*market equity risk premium of 10.4%)		2.6%
Investor Required Market Return	11.7%	13.0%
Average of Historical CAPM Tests	10.3%	11.2%
Average of Projected CAPM Tests	11.5%	12.8%
Average of All CAPM Tests	10.9%	12.0%

Average of Standard and Empirical CAPM Tests

11.4%

Sources: Value Line, IBES, S&P, Zacks and Federal Reserve

Florida Public Service Commission Docket No. 010949-EI GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 9 Page 16 of 16

# Transformed CAPM Test for Gulf Power Company's Comparable Companies (a)

	G	ulf Pw.
Standard & Empirical CAPM Model Results	Co	mp. Co's
Book Value	\$	27.41
Regulatory Return		11.4%
Earnings Per Share	\$ 	3.12
Dividend Per Share	\$ \$	2.09
Dividend Payout		66.89%
Retention Rate		33.11%
Sustainable Growth Rate		3.78%
Current Yield		5.69%
Market Return to Investors		9.5%

Necessary Regulatory Return on Common Stock for Investors to Earn Required Market Return		ulf Pw. mp. Co's
Book Value	\$ 	27.41
Regulatory Return		13.3%
EPŠ	\$ 	3.65
Dividend Per Share	\$ \$	2.09
Dividend Payout Ratio		57.33%
Retention Rate		42.67%
Sustainable Growth Flate		5.68%
Current Yield		5. <b>69%</b>
Market Return to Investors		11.4%

(a) Excludes flotation costs

Sources: Previous Exhibit\_\_\_(CAB-9) Schedules

Florida Public Service Commission Docket No. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 10 Page 1 of 6

# Gulf Power Company's Comparable Earnings Model

## COMPARABLE EARNINGS MODEL DESCRIPTION

As first noted in the <u>Bluefield</u> U.S. Supreme Court decision, and later confirmed by the <u>Hope</u>, <u>Permian Basin</u> and <u>Duquesne</u> decisions, the return on common stock equity should be commensurate with returns for comparable risk firms.

# THE COMPARABLE EARNINGS TEST IS A VALID TEST FOR DETERMINING GULF POWER COMPANY'S COST OF COMMON STOCK

In considering the use of the Comparable Earnings method, it is instructive to review a study of how financial analysts determine the value of common stocks provided by Stanley B. Block who surveyed a randomly selected group of members of the Association for Investment Management and Research. The study, entitled "A Study of Financial Analysts: Practice and

Florida Public Service Commission Docket No. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 10 Page 2 of 6

Theory," appeared in the July/August 1999 Financial Analysts Journal. About 90 percent of the respondents had five or more years of experience, all had college degrees with 56 percent having advanced degrees, and 68 percent had passed a series of examinations to earn the Chartered Financial Analyst designation.

On methods of common stock valuation, the analysts were asked to state, "how important is the dividend valuation model, as shown below, in helping to determine value"? Po = D1/(ke-g). The formula is equivalent to the dividend discount model differently stated as ke = D1/Po + g. Of the respondents, 54 percent indicated that the DCF model was "very important," or "moderately important." The remainder thought the model to be "not very important' to "unimportant." For the CAPM, 31 percent thought the model was "very important" to "moderately important" in valuing common stocks with the remainder indicating "not very important" or "unimportant." Investors were not questioned about Comparable Earnings and Equity Risk Premium methods.

The survey results suggest that theory and practice in the investment community can widely vary, and therefore, that a multiple number of models should be used to best capture investor expectations. Accordingly, "Comparable

Florida Public Service Commission Docket No. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 10 Page 3 of 6

Earnings" should be included among the methods used to determine the appropriate regulatory return on common stock equity.

#### There are several other reasons:

- it is the most widely used model by regulators based on an NARUC survey after the DCF model,
- it is supported by the <u>Bluefield, Hope, Permian Basin, and</u>
   <u>Duquesne U. S. Supreme Court decisions.</u>
- 3. it is an apples to apples method, which determines the book return on common stock equity of comparable risk firms (electric utility companies can be used to avoid the business risk controversy over monopoly versus competitive businesses) expected by investors to determine the book return on common stock equity allowed by regulators,
- 4. it is easy to understand, and simple to implement,
- it avoids the problem of over, or under, rewarding investors
   when prices and book values are materially different from unity,
- 6. it acknowledges the linkage between the return on common

Florida Public Service Commission Docket No. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 10 Page 4 of 6

- 7. stock equity and the growth rate used in the DCF model, and
- it moves beyond complete reliance on market-based-models to book based models, or a more diversified approach to better reflect investor methods of valuing electric utility common stocks.

# THE COMPARABLE EARNINGS METHOD IS A VALID TEST FOR DETERMINING THE ALLOWED REGULATORY RETURN

Underlying investor earnings growth expectations is the level of profitability of the firm, or return on common stock equity. The allowed regulatory return when multiplied by common stock equity yields net income for investors, or earnings. As noted by the sustainable growth rate formula, when the return on common stock equity and the addition to retained earnings (earnings retention rate) are constant, earnings and dividends will grow at the rate produced by multiplying the return on common stock equity by the earnings retention rate.

Consequently, it is necessary to acknowledge the investor expected return on common stock equity as one of two primary building blocks for

Florida Public Service Commission Docket No. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 10 Page 5 of 6

determining earnings, and sustainable earnings growth, in the future. Moreover, use of the comparable earnings method eliminates the problem of material differences in price and book value, and therefore, provides a direct measure of the investor expected return and the appropriate regulatory return. Transformation is not needed for the Comparable Earnings method.

# COMPARABLE EARNINGS TEST RESULTS FOR GULF POWER COMPANY

The Comparable Earnings test employs the long-term, expected return on common stock equity for Gulf Power Company's comparable companies. This is consistent in my judgment with the <u>Bluefield U.S.</u>

Supreme Court decision indicating "the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks."

Value Line's, long-term (2004-2006) return on common stock equity projections for Gulf Power Company's truncated comparable companies, as shown on page 5 of this Schedule, averages 13.3 percent.

Florida Public Service Commission Docket No. 010949-EI GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 10 Page 6 of 6

# Value Line Projected Book Values, and Returns on Year-End Common Stock Equity

		Truncated		Truncated
Gulf Power Company's	2004-2006	2004-2006	2004-2006	2004-2006
Comparable Companies	Book Value	Book Value	ROE	ROE
Allegheny Energy, AYE	34.25		16.0%	
Alliant Energy, LNT	29.25	29.25	10.0%	10.0%
Ameren Corp., AEE	28.70	28.70	13.5%	13.5%
Cinergy Corp., CIN	23.20	23.20	13.5%	13.5%
FPL Group, FPL	33.50	33.50	15.0%	15.0%
Progress Energy, PGN	33.80	33.80	12.5%	12.5%
TECO Energy, TE	16.00	16.00	15.5%	15.5%
Wisconsin Energy, WEC	24.50		10.5%	
Average	27.90	27.41	13.3%	13.3%

Source: Latest Value Line Reports

Florida Public Service Commission Docket No. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 11 Page 1 of 7

#### **FLOTATION COSTS**

An adjustment for flotation costs is necessary so that investors can earn the return found fair by the Commission on the full amount of their investment.

As I will show, it is a necessary adjustment even if new common stock is not sold.

The reason an adjustment is needed is because we are not dealing with an expense in the rate-making sense, but a permanent capital shortfall, or reduction, in earning assets caused by flotation costs. Because of flotation costs, the proceeds from selling common stock shown on the balance sheet are less than the investment by investors. Therefore, regulatory earning assets are less than investor, invested assets. A fair rate of return applied to the lower level of regulatory earning assets, therefore, produces a lower than fair rate of return on the full amount of the investment by investors.

Thus, in order for investors to earn their required return on the full amount of their investment, an adjustment must be made for flotation costs. To determine the adjustment to the investor-required-market-return, the dividend yield on the first holding year dividend is divided by 1.0 minus flotation costs of 3 percent (0.97 = 1.0 - .03). The result is the "adjusted yield," including the effects of flotation costs. The actual yield is then subtracted from the adjusted yield. This difference is the adjustment to the investor-required return on common equity for the effects of flotation costs.

There have been several flotation cost studies such as by Bonum and Mallei, which showed flotation costs of about 5.5 percent. A lower estimate by

Florida Public Service Commission Docket No. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 11 Page 2 of 7

Eckbo and Masulis has been cited in a later study of about 4 percent.

While these studies are assumed to be good indicators of flotation costs up to about 1980, competition on Wall Street has increased and more shares are now issued through dividend reinvestment and employee stock ownership plans. Therefore, I believe that flotation costs are now lower than indicated by these studies. In my analysis I used 3 percent as a flotation cost adjustment. This adjustment, which enables investors to earn the Commission determined return on their full investment, is 0.2 percent as shown on Schedule 7, page 16.

I do not believe that it is proper to adjust the retained earnings component of common stock equity for flotation costs since there are no flotation costs associated with retained earnings.

#### FLOTATION COST JUSTIFICATION

Flotation, or issuance, costs are those costs incurred in the issuance of new common stock, and take the form of underwriter's compensation and other related expenses. An adjustment for these costs is necessary in determining the cost of common stock if investors are to earn the return on found fair by the Commission on the full of their investment. It is also a necessary adjustment even if new common stock is not sold.

Because of issuance costs, net proceeds to the company from the sale of common stock are less than invested by investors. Therefore, issuance costs not recovered as expenses in the ratemaking sense result in a permanent reduction in common stock equity of the company. A fair return applied to the

Florida Public Service Commission Docket No. 010949-EI GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 11 Page 3 of 7

lower than invested common stock equity by investors necessarily results in a lower return on their investment than found to be required by regulators.

### Bond Example

When evaluating the need for an adjustment for common stock issuance costs, it is instructive to note the treatment given to expenses incurred with a debt issuance. The true cost of debt, issued at par, is greater than its coupon interest rate because of the cost incurred in issuing the bonds. For example, if a company sold \$100 million of debt at par with a 10.0 percent rate of interest and received proceeds of \$97 million, the cost to the company is not 10.0 percent, but is 10.33 percent. The cost is higher than 10.0 percent because proceeds to the company were less than the amount of debt issued due to issuance costs. The higher cost reflects recovery of issuance costs over the life of the bond, irrespective of whether additional new debt is, or is not, sold.

#### Perpetual Preferred Stock Example

A similar adjustment is necessary to determine the cost of perpetual preferred stock. For example, if a company issued \$100 million of perpetual preferred stock at par with an 8.50 percent dividend rate, but only received proceeds after issuance costs of \$97.5 million, the cost to the company is 8.72 percent, not 8.50 percent. In this case, the preferred stock has a perpetual term that is the same as for common stock.

Florida Public Service Commission Docket No. 010949-El

GULF POWER COMPANY

Witness: Charles A. Benore

Exhibit No.\_\_\_(CAB-1)

Schedule 11 Page 4 of 7

Common Stock Example

Common stock requires the same adjustment as for perpetual preferred stock

and for bonds. After incurring and paying issuance costs, net proceeds to the

company are less than the amount invested by investors. The net proceeds

from the common stock investment, therefore, must earn at a higher rate of

return in order to avoid a diluted return to investors.

A simple example, which is part of this Schedule shows that a permanent

adjustment for flotation costs is necessary even if new common stock is not sold.

Assume, for example,

1. The company issued \$100 million of common stock.

2. The cost of common stock was 13.0 percent with a 4.5 percent

growth rate and an 8.5 percent yield. The cost of common stock

determined by regulators was 13.0 percent.

3. Issuance costs were 4.0 percent.

No additional common stock was sold.

After issuance costs, proceeds from the \$100 million common stock sale would

be \$96.0 million. Therefore, the common equity added to the company's

balance sheet is \$96.0 million. The example in the table accompanying this

Florida Public Service Commission Docket No. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 11 Page 5 of 7

Schedule shows that an allowed return of 13.35 percent on the reduced (after issuance costs) common stock equity balance is required in order for investors to earn the 13.0 percent cost of common stock.

The formula to equate the cost of common stock to the return necessary after issuance costs is to divide the yield on the twelve-month forward dividend by 1.0 percent less issuance costs. Issuance costs are the difference between the yield with issuance costs and the standard yield. In the example, the yield of 8.5 percent divided by 1 - .04, or .96, is 8.85 percent. The difference between 8.85 percent and 8.50 percent, or 0.35 percent, is the adjustment necessary to represent flotation costs (13.0 percent required investor return plus flotation costs of 0.35 percent equals 13.35 percent).

## Important Note

It is important to note that the 13.35 percent return is required in each year to produce the 13.0 percent required return by investors, even if new common stock is not sold.

Fiorida Public Service Commission Docket No. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 11 Page 6 of 7

## **KEY TO ISSUANCE COST EXAMPLE**

A: Common Equity	(1.004 issuance costs) X \$100 million in new equity equals \$96 million
B: Retained Earnings	Prior year's earnings - prior year's dividends; (Column E) - (Column G X Column H)
C: Total Equity	Prior year's equity + current year's retained earnings (prior year's Column C + Column B)
D: Required ROE	Dividend yield divided by 1.0 - issuance costs plus growth rate ((8.5 percent/1.004) + 4.5 percent) = 13.35 percent
E: Current Earnings	Total equity X required return (Column C) X (Column D), \$96.0 million X 13.35 percent = 12.82 million
F: Payout Ratio	1 - (Growth required/required ROE) 1 - (.045/.1335) = 66.3 percent
G: Common Shares	Total equity invested by investors/par value \$100 million/\$10 = 10 million
H: Div. Per Share	Earnings X payout ratio/shares of common (Column E) X (Column F) / (Column G) (\$12.82 X 66.3 percent)/10 million shares = \$0.85
I: Dividend Yield	Dividends per share/share price (\$0.85 / \$10.00) = 8.5 percent
J: Share Price	Dividends per share / (required return - growth rate); \$0.85 / (0.13045) = \$10.00
K: Price Change	Year to year percentage change in price (\$10.45 - \$10.00) / \$10.00 = 4.5 percent
L: Investor Return	Dividend yield + share price appreciation (Column I) + (Column K) 8.50 percent + 4.5 percent = 13.0 percent

Florida Public Service Commission Docket No. 010949-El GULF POWER COMPANY Witness: Charles A. Benore Exhibit No.\_\_\_(CAB-1) Schedule 11 Page 7 of 7

# Flotation Costs Are a Necessary Adjustment to the Cost of Common Stock in Order That Investors Can Earn Their Required Return

Column	Α	В	С	D	E	F
	Common	Retained	Total	Required	Current	Payout
Year	Equity	Earn's Prev Yr	Com. Eq.	ROE	Earnings	Ratio
	\$MM	\$MM	\$MM	%	\$MM	%
0	96.00		96.00	0.1335	12.82	0.663
1	96.00	4.32	100.32	0.1335	13.39	0.663
2	96.00	4.51	104.83	0.1335	14.00	0.663
3	96.00	4.72	109.55	0.1335	14.62	0.663
4	96.00	4.93	114.48	0.1335	15.28	0.663
5	96.00	5.15	119.63	0.1335	15.97	0.663
_	_		_			
Column	G	Н	ı	J	ĸ	L
	Common	Dividends	Dividend	Share	Price	Total
Year	Shares	Per Share	Yield	Price	Change	Return
	(MM)	\$	%	\$	%	%
0 -	10	0.850	8.5%	10.00		
1	10	0.888	8.5%	10.45	4.5%	13.0%
2	10	0.928	8.5%	10.92	4.5%	13.0%
3	10	0.970	8.5%	11.41	4.5%	13.0%
4	10	1.013	8.5%	11.93	4.5%	13.0%
5	10	1.059	8.5%	12.46	4.5%	13.0%