

REBUTTAL TESTIMONY

OF

GEORGE BACHMAN
ROBERT CAMFIELD

TO

DIRECT TESTIMONY OF MARK CICCHETTI

DOCKET NO. 030438-EI:

Petition of Florida Public Utilities Company For An Increase In its Rates and Charges In
Their Consolidated Electric Division

January 23, 2004

DOCUMENT NUMBER-DATE

01084 JAN 23 3

FPSC-COMMISSION CLERK

1 **Qualifications and Experience**

2 **Q. What is your name, title, business address, and background?**

3 A Witness Bachman. My name is George Bachman. I am the Chief Financial
4 Officer, Treasurer, and Corporate Secretary of Florida Public Utilities Company.
5 My business address is 401 South Dixie Highway, West Palm Beach, Florida,
6 33401.

7 Witness Camfield. My name is Robert Camfield. I am a Vice President with
8 Laurits R. Christensen Associates, Inc. and my business address is Suite 700 4610
9 University Avenue, Madison, Wisconsin, 53705.

10 **PURPOSE OF TESTIMONY**

11 **Q. What warrants your rebuttal testimony?**

12 A. Witness Camfield and Bachman. We wish to reply to and comment on the direct
13 testimony of Mark Cicchetti who testified on behalf of The Office of Public
14 Council.

15 **Q. Can you please comment on Mr. Cicchetti's cost of capital analysis and his
16 rate of return recommendations.**

17 A. Witness Camfield. Yes. His analyses and recommendations appear to understate
18 the cost of capital significantly. Using Mr. Cicchetti's recommendations to set
19 retail electricity prices for Florida Public Utilities Company would appear to
20 violate conventional notions of fairness and the regulatory compact between retail
21 consumers and investors, and potentially constitutes a breach of public utility
22 principles and the statutory requirements that govern contemporary regulatory
23 practice.

1 Thus, we caution the Commission in its consideration of Mr. Cicchetti's analyses
2 and accompanying recommendations. To help guide the Commission, it is
3 perhaps useful to explore a lower bound of a plausible range for the cost of equity,
4 and to then gauge where Mr. Cicchetti's analyses fall. Specifically, equity markets
5 have experienced equity risk premia with respect to government bonds of 7.5%
6 over the 1950-2001 timeframe, and 7.7% over the 1992-2001 timeframe,
7 calculated arithmetically. We exclude 2002 insofar as the losses in equities were
8 exceptional, like that of 1975. Mr. Cicchetti's projected long-term rate of 5.3%
9 for government bonds obtains an implied cost of capital of 12.8–13.0%, for the
10 market as a whole over the extended long term. This presumes a long-term
11 decline in the market cost of capital vis-à-vis the current environment through
12 about 2006 (15%), where cost of capital is likely to remain at fairly high in real
13 terms. The 12.8-13.0% is somewhat overstated because of the way that the data
14 are reported, but nevertheless provides a useful benchmark

15 As shown by Ibbotson Associates using data of the Center for Research In
16 Security Prices (CRSP) at the University of Chicago, small capitalization equities
17 have incrementally high risk premia with respect to the market as a whole of 1.9%
18 though somewhat less recently. This obtains a risk premia-based cost of capital
19 value of 13.5–15.0% over the long-term for small equities. Surrendering, by
20 assumption, a large three percentage points for incrementally lower risks of Mr.
21 Cicchetti's sample of utilities with reference to small equities obtains a plausible
22 lower bound for the cost capital of 10.5-12.0%. Yet, Mr. Cicchetti indicates that
23 the opportunity cost of capital for Florida Public Utilities is yet another 200

1 hundred basis points lower. Regrettably, we are obliged to advise the
2 Commission that Mr. Cicchetti's recommendations reside well beyond the range
3 of plausible estimates of the underlying cost of capital. Employing the analysis
4 and recommendation of Mr. Cicchetti in any manner will impose undue harm on
5 Florida Public Utilities Company and its retail customers.

6 **Q. Please provide detailed comments on Mr. Cicchetti's analyses and approach.**

7 A. Witness Camfield. First, Mr. Cicchetti employs one approach, two-stage DCF. It
8 is useful to note that Mr. Cicchetti's so-called risk premia analysis is founded on
9 discounted cash flow as well, and is not a distinctly different methodology.
10 Second, Mr. Cicchetti's determination of expected growth in cash flows within
11 the DCF framework is driven by long-term assumptions that appear somewhat
12 low in view of recent history, for the relevant timeframe. It is essential to capture
13 the opportunity cost of capital for the relevant timeframe over which retail prices
14 are likely to be in force prospectively. Third, Mr. Cicchetti understates the
15 expected issuance costs associated with applicant's upcoming equity issue, as
16 applied in his DCF analysis.

17 **Q. Please comment on Mr. Cicchetti's inference that long-term contracting is
18 risky than owning generation assets.**

19 A. Witness Camfield. Because generation services including energy and reserves are
20 increasingly procured competitively, and because the wholesale market
21 environment demonstrates unusually high price variation due to non-storability
22 and transmission externalities, generation assets carry higher capital risks than
23 distribution assets, taken on a stand-alone basis. However, it does not necessarily

1 follow that a distribution company is less risky and thus less costly than a service
2 provider that possesses generation assets. This is because capital risks attending
3 supply are capitalized and embodied in the services supplied. This means that, to
4 the degree that generation supply harbors relatively higher risks, the costs
5 associated with higher capital risks are captured in short-term (spot and day-
6 ahead) and long-term offer prices for energy reserves. Essentially, the costs
7 associated with capital risks are present in electricity markets and retail prices,
8 whether retail service providers choose to procure generation services by
9 building, owning, and operating generation facilities, or choose to contract for
10 such services.

11 **Q. Can you please comment as regards to Mr. Cicchetti's recommendation to**
12 **use the average 2004 capital structure?**

13 A. Witnesses Camfield and Bachman. The critical factor as far as capital structure is
14 concerned is the participation of common equity in total capital. The year-end '04
15 structure enables the Company to move forward in a positive manner and to
16 obtain additional capital necessary to maintain its electricity supply infrastructure
17 and to continue to provide low-cost and reliable service.
18 We are, however, not necessarily wedded to the year-end '04 capital structure per
19 se. Rather, only that it represents an appropriate share of common equity
20 participation in total capital that when stated on a traditional basis is near 50%,
21 and when stated on a regulatory capital structure basis is no less than about 47%.
22 In this regard, other approaches that achieve an appropriate capital structure with

1 sufficient equity participation may be availing -- such as a hypothetical
2 prospective capital structure.

3 We add that, for reasons discussed in the testimony of Bachman and Camfield,
4 the electricity services and, more generally, energy industry is confronting
5 heightened risks of several dimensions, which are substantially more pronounced
6 than in previous eras and years. Accordingly, it is appropriate for FPU to
7 underwrite its assets with a larger share of equity than in previous years. Prior to
8 recent industry events the banking environment was favorable and allowed for
9 aggressive leveraging at favorable interest rates without fear of violating debt
10 covenants or bankruptcy. The current environment requires less aggressive
11 leverage as demonstrated in the recent changes experienced when renewing our
12 line of credit (LOC). The LOC renewal requires our accounts receivable and
13 environmental funds for collateral, along with increased fees and new debt
14 covenant restrictions. In view of these developments, the company feels bringing
15 the debt/equity ratio closer to 50:50 will result in a stronger financial position to
16 protect the company during tough economic times. We will continue to assess the
17 risks of increasing leverage to achieve lower cost of capital. However, a year-end
18 structure is the most realistic basis reflecting the new environment going forward.

19 We have conducted two studies in support of the position that the year-end '04
20 capital structure approaches optimality. First, is a comparative study of the means
21 by which other utilities underwrite assets. The comparative study develops the
22 non-weighted average equity participation in total capital for all listed utilities
23 over the 1993 - 2002 timeframe, and includes a measure of the corresponding

1 statistical variation. Over these years, utilities have carried an average of 40% to
2 47% percent equity, with the corresponding standard deviation of 11% to 6%.
3 Hence, the recommended year-end '04 capital structure for Florida Public
4 Utilities falls well within one standard deviation of the average. The second study
5 is a simulation of the weighted-average cost of capital, with and without income
6 taxes, for various combinations of equity and debt participation. The simulations
7 recognize the sensitivity of the cost rates of both debt and equity, to equity
8 participation. Specifically, lower levels of equity participation raise the cost rates
9 of debt and equity because of the higher risks associated with increased debt
10 participation. The results suggest that the overall weighted average cost of capital
11 is fairly insensitive over a fairly broad range of equity participation, stated on the
12 basis of a regulated capital structure which includes non-traditional sources of
13 funds. Thin equity participation reduces interest cover on debt, and increases the
14 variation and uncertainty associated with cash flow and earnings, stated on a per
15 share basis. Considering the small size of Florida Public Utilities Company and
16 view of the heightened risks that concurrently confront the industry, our
17 recommendation for a year-end capital structure is thus well within the bounds of
18 reasonableness.

19 **Q. Mr. Cicchetti indicates that historical realized returns should not be used as**
20 **plausible surrogates for expected returns harbored by investors. Please**
21 **comment.**

22 **A. Witnesses Camfield and Bachman.** We suggest that it is entirely appropriate to
23 incorporate historical returns insofar as history serves as the basis for all

1 knowledge, information, and normative and positive models about the future.
2 Generally, history and what we infer from it, is all that we know. Within the
3 context of financial markets and the cost of capital, history plays a key role.
4 Historical returns underlie the principles of efficient markets. These rather
5 intuitive arguments, moreover, are fully supported by modern finance theory and
6 empirical studies. Indeed, Professor Fama of the University of Chicago along
7 with other noted researchers have extensively studied this issue. Fama codifies
8 the research on this issue in his treatise, *Foundations in Finance*, where he
9 indicates that expected future returns capture and embody historical returns.
10 Similarly, in *Stocks, Bonds, Bills, and Inflation: Historical Returns (12926-1978)*,
11 Ibbotson and Sinqufield explicitly state that they forecast market returns on a
12 basis historical returns and inflation which is, they say, consistent with efficient
13 capital market theory. Supporting comments by William Sharpe of the University
14 of California can be found in *Modern Developments in Investment Management*,
15 as compiled by James Lorie and Richard Brealey. Furthermore, and as suggested
16 by David Luenberger of Stanford University in his treatise, *Investment Science*, it
17 is appropriate – and arguably essential – to sample past returns from several
18 timeframes, as we have done.

19 This is not to imply, however, that the Commission should utilize exclusively or
20 give significant and undue weight to historical realized returns, as other
21 information and analysis comes to bear in the valuation of financial assets by
22 investors. Accordingly, we also utilize discounted cash flow, capital pricing
23 model, and risk premium methodologies.

1 **Q. Mr. Cicchetti takes issue with your the 2.0 – 2.5% percentage point discount**
2 **for risks associated with electric companies vis-à-vis the market as a whole in**
3 **your risk premia analysis. Can you comment?**

4 A. Witness Camfield. Yes. Our risk premia analysis is determined for the market as a
5 whole, and then adjusted. Our analysis of risk premia is consistent with the
6 efficient market hypothesis, and can be estimated directly for electric utilities over
7 a shorter time frame, as the data is available. However, we prefer to examine
8 fairly long-term periods that provide a close match to the near term future (2004 –
9 2007). However, doing so requires the adjustment taken. While CAPM alone
10 suggests a somewhat larger adjustment for risk, it is not clear that all investors are
11 full diversified, which is inherent to CAPM theory. Second, evidence suggests
12 that CAPM may understate the cost of capital for small capitalization equities. In
13 short, we suggest that the adjustment of 2.0 – 2.5% is appropriate.

14 **Q. Mr. Cicchetti seems to imply that the risk free rate of 4.1% is to high, in view**
15 **of current rates?**

16 A. Witness Camfield. While there is no doubt about low interest rates currently, it is
17 important to consider where short- and medium-term rates may reside over the
18 relevant prospective timeframe, through about 2007. Four percentage points
19 appears appropriate for 1-year Treasuries in view of experience over recent years
20 of comparatively low inflation. As shown by the Federal Reserve Bank of St.
21 Louis, 1-year Treasury yields have carried returns of slightly greater than 2.0% in
22 real terms on average over 1993–2001. With observed and expected inflation
23 near 2%, our short-term (risk-free) rate seems appropriate. We might mention

1 that short-term rates are sensitive to the supply of short term funds, as determined
2 by the execution of monetary policy by the U.S. Federal Reserve. Real short-term
3 rates can swing by 3 – 5% within a year’s time, and we should not surprise us that
4 1-year treasury yields would rise to 4% stated in nominal terms (2% real terms)
5 within less than a year.

6 **Q. Mr. Cicchetti suggests that cash flow per share is not an appropriate basis**
7 **for estimation of investor expectations of growth and thus returns. Please**
8 **comment.**

9 A. Witnesses Camfield and Bachman. We can never fully understand the basis for
10 investor expectations as they are not observable. This leaves the cost of capital
11 question unresolved. A large range of possible approaches to gauge expectations
12 are available, and the historical series including cash flow, earnings, and
13 dividends are all plausible. Empirical evidence, however, suggests that cash flow
14 is a major if not dominant basis by which investors assess the prospects for future
15 growth. As demonstrated by Burton Malkiel of Princeton University in *The*
16 *Valuation of Public Utility Equities* in the Rand Journal of Economics, the
17 internal generation of cash (cash flow) has significant impact on investor
18 expectations. In fact, Professor Malkiel finds that cash flow per share to be the
19 most significant measure of historical measures among numerous alternative
20 measures. Professor Malkiel states, “From the forty candidates, one calculated
21 growth rate was either clearly superior or, at least, no worse than any of the others
22 in each of the years and was used in the regressions based on historical data. This
23 was the ten-year rate of cash earnings per share (i.e., earnings plus depreciation

1 and amortization) calculated as the geometric mean of the first ratios (page 148-
2 149).” It is important to put this into the proper context. Specifically, Malkiel
3 derives a form of Gordon’s discounted cash flow (DCF), which is shown to be
4 applicable for a finite timeframe. Indeed, the finite DCF variation of Gordon’s
5 DCF is the model that we use in our DCF analysis. Conforming to this line of
6 thought, David Luenberger in *Investment Science* specifically mentions that
7 internal cash returns to capital within the context of DCF to be the preferred
8 approach, though recognizing difficulties in determining cash flow. Our
9 experience in investment and asset valuation reveals that the investment
10 community is strongly focused on cash flow as the basis to assess the future
11 returns to capital. Also, our research has shown that non-cash returns to capital
12 imply higher capital costs, thus emphasizing the importance of internal cash.
13 Finally the analysis presented in our testimony clearly shows that cash flow has
14 much lower volatility than earnings and, within the context of utilities, is close to
15 dividends. This is not surprising because, as a practice matter, cash flow provides
16 a basis to declare and underwrite dividends, thus allowing for greater stability in
17 dividend flows.

18 Q. Does this conclude your testimony?

19 A. Witness Camfield and Bachman. Yes.