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January 22, 2008

BY HAND DELIVERY
Ms. Ann Cole, Director
Commission Clerk and Administrative Services
Room 110, Easley Building
Florida Public Service Commission
2540 Shumard Oak Blvd.
Tallahassee, Florida 32399-0850

Re: Docket Nos. 070300-EI and 070304-EI

Dear Ms. Cole:

Enclosed for filing on behalf of Florida Public Utilities Company are the following documents:

1. An original and 15 copies of the Rebuttal Testimony of Robert Camfield on behalf of Florida Public Utilities Company; 00551-08

2. An original and 15 copies of the Rebuttal Testimony of Doreen Cox on behalf of Florida Public Utilities Company; 00552-08

3. An original and 15 copies of the Rebuttal Testimony of P. Mark Cutshaw on behalf of Florida Public Utilities Company; 00553-08

CMP 2
COM 5
CTR 1
ECR
GCL 1
OPC
RCA 1
SCR
SGA
SEC
OTH

4. An original and 15 copies of the Rebuttal Testimony of Mehrdad Khojasteh on behalf of Florida Public Utilities Company; 00554-08

5. An original and 15 copies of the Rebuttal Testimony of Cheryl Martin on behalf of Florida Public Utilities Company 00555-08

6. An original and 15 copies of the Rebuttal Testimony of Jim V. Mesite, Jr. on behalf of Florida Public Utilities Company, 00556-08

7. An original and 15 copies of a Request for Confidential Treatment; and 00557-08 Request
00558-08 Confidential

Regional Center Office Park / 2618 Centennial Place / Tallahassee, Florida 32308
Mailing Address: P.O. Box 15579 / Tallahassee, Florida 32317
Main Telephone: (850) 222-0720 / *Fax:* (850) 224-4359

8. An original and one copy of Florida Public Utilities Company's Notice of Service of Supplemental Response to Citizens' First Set of Interrogatories and Citizens' Second Request for Production of Documents. 00559-08

Please acknowledge receipt of this letter by stamping the extra copy of this letter "filed" and returning the same to me.

Thank you for your assistance with this filing.

Sincerely yours,

Norman H. Horton, Jr.

NHH/amb
Enclosure
cc: Ms. Cheryl M. Martin
Parties of Record

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that true and correct copies of the foregoing have been served by U. S. Mail this 22nd day of January, 2008 upon the following:

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NORMAN H. HORTON, JR.

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 070304-EI

REBUTTAL TESTIMONY
OF
DR. J. RANDALL WOOLRIDGE

BY
ROBERT J. CAMFIELD

ON BEHALF OF
FLORIDA PUBLIC UTILITIES COMPANY

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Robert J. Camfield, and my business address is 4610 University Avenue, Madison, Wisconsin 53705.

Q. HAVE YOU PREPARED AND PRE-FILED DIRECT TESTIMONY IN THIS DOCKET?

A. Yes, that is correct.

Q. WHAT IS THE SCOPE OF YOUR REBUTTAL TESTIMONY?

A. This testimony is offered to the Commission as rebuttal to the pre-filed direct testimony of Dr. J. Randall Woolridge on behalf of the Office of Public Council addressing issues related to, and providing recommendations for, the cost of capital of Florida Public Utilities Company ("FPU" or "Company"), within the immediate docket. This testimony also addresses the comments, critique, and concerns raised by Dr. Woolridge in his rebuttal testimony regarding my

original estimates of the cost of capital, in particular the cost of equity and return on equity recommendation.

Q. WHAT SPECIFIC COST OF CAPITAL ISSUES DO YOU ADDRESS WITHIN YOUR IMMEDIATE TESTIMONY?

A. In this rebuttal testimony the cost of capital concerns and issues that I wish to raise for the consideration of the Florida Public Service Commission are as follows:

1. Issuance costs associated with the Company's anticipated issue of additional shares of common equity, for recognition in the allowed equity rate of return.

2. The definition of the year-forward dividend yield within the discounted cash flow method for estimation of the cost of equity capital.

3. The appropriate short-term cost rate to be applied to the Company's balances of short-debt debt.

4. Capital costs in 2006 and 2007, and whether or capital cost rates have changed in 2007.

5. The appropriate basis to measure historical realized market returns and risk premia, as the basis for determining estimates of the cost of equity capital.

6. The use of the Capital Asset Pricing Model ('CAPM") in isolation of other methods.

7. The appropriateness of *ex ante* risk premia, for use within the CAPM cost of capital framework.

8. The appropriateness and realism of size-related risk premia within the context of the CAPM- and Risk Premium-based cost of capital methods, where size premia are used to determine the cost of capital for very small companies such as the applicant before the Commission in the immediate docket, Florida Public Utilities Company.

Below, I address each of issues identified above.

Q. PLEASE RESPOND TO AND ELABORATE ON THE RECOGNITION OF ISSUANCE COSTS WITHIN THE ALLOWED RATE OF RETURN ON EQUITY.

A. Issuance costs are real transactions costs, paid out in the course of providing funding for the Company's internal requirements for the cost of equity. Such costs reduce net proceeds realized by the Company from its pending sale of new equity securities and are fully justifiable. Accordingly, the Commission should account for such costs in full.

Professor Woolridge makes the following observations regarding the recognition of issuance costs for equity within the cost of capital and allowed rate of return. Dr. Woolridge indicates that the Company should document its proposed issuance costs and recognizes that issuance costs are composed of two

elements, including the direct expenses associated with the transaction, and the discount claimed by the underwriters that sell the shares, where the discount is the difference between the price at which the shares are sold within primary markets, and the net proceeds realized by the Company. Dr. Woolridge recognizes that the direct expenses associated with the sale of securities, if the sale of shares is a real event and such expenses are at justifiable levels, are valid costs incurred in the course of doing business. Further, Dr. Woolridge suggests that the appropriate basis for recovery of such costs is within the ongoing expenses of the Company that, presumably, should be recovered directly in revenues charged to retail electricity consumers. Finally, Dr. Woolridge takes the position that discount spread for the sale of equity securities should not be recovered. Dr. Woolridge's view regarding the latter issue, which I will loosely refer to as discount spread, is as follows:

1) such transaction cost, which raises the cost of equity to the issuing Company, is offset by the transaction cost incurred by investors as counter parties to the sale of new securities; and

2) market prices of common equity shares for electric and gas utilities are trading at values substantially above book value. Accordingly, as argued by Dr. Woolridge, market prices are at a level sufficient to absorb any dilution of earnings per share in the form of additional shares outstanding that the internal returns to capital must cover.

My view on the recovery of issuance costs is that such costs reflect the resources associated with primary securities markets, and are thus true costs, as incurred by the counter parties to the transaction (sale), and that both parties would capitalize the transactions costs that each incurs within the price that they would be willing to pay for, and be willing to sell, the new securities. In the case of the issuing party, Florida Public Utilities Company, such costs are in the form of reduced proceeds from the sale, where the result is to raise the net carrying charge rate on the capital that is obtained.

A related question is whether there is a sufficient level of market efficiency associated with the bidding processes of competing security underwriters, in their role of providing the investment banking services. I do not find that the counterparty cancellation view, advanced by Dr. Woolridge, has merit. Moreover, the position that no dilution of book value takes place because market prices trade above book value is not, in my view, the relevant question. Rather, the question is whether the discount spread, which covers the resource costs of the investment banking services, are real economic costs and thus a valid component of the opportunity cost (rate) of capital (which is the net market discount rate of investors) to fund the incremental capital requirements of the firm. Certainly, my testimony does not mention book value dilution as the basis for acceptance or rejection of issuance costs by the Commission for inclusion within the cost of equity capital and allowed overall rate of return for the Company. Common equity of the firm is valued at the marginal cost of

capital to the firm. On the basis of opportunity cost of capital (to fund incremental capital by the firm) in past testimony and in capital valuation studies, I have advanced the position that it is appropriate to recognize issuance costs on the share of increased equity capital raised externally.

Q. WHAT ARE THE CONSEQUENCES IF THE COMISSION DENIES THE COMPANY'S REQUEST TO RECOVER JUSTIFIABLE ISSUANCE COSTS?

A. It means that, by regulatory design, equity shareholders obtain returns on the capital committed to the provision of electricity services for the convenience and necessity of the public, that are less than the opportunity cost of capital.

Q. WHAT IS THE NET IMPACT ON THE COST OF COMMON EQUITY TO THE COMPANY AND THE ALLOWED RATE OF RETURN, AS A CONSEQUENCE TO THE COMMISSION'S RECOGNITION OF THE ISSUANCE COSTS ATTENDING THE COMPANY'S NEW SHARES OF COMMON EQUITY?

A. The estimated net impact on the cost of equity and allowed rate of return by the Florida Commission is equal to 0.33%, or 33 basis points.

Q. YOUR ISSUES LIST MENTIONS THE DETERMINATION OF THE FORWARD-YEAR DIVIDEND YIELD WITHIN THE CONTEXT OF DCF METHODOLOGY. PLEASE ELABORATE.

A. Professor Woolridge argues that the Company's DCF analysis has incorrectly specified the so-called forward-year dividend. Because I am unsure of precisely what Dr. Woolridge means, I will proceed to explain the approach that I have taken, which I believe is correct. That is, the observed dividend rate for the quarter previous to or for the month in which market price is sampled serves as the basis to determine the previous period's dividend rate. In many cases, utilities change the dividend rate no more frequently than annually, though exceptions to this general can be easily found in the historical records of dividend payments. The previous 3-4 years are used to gauge when a reasonable investor might expect the dividend rate to change, within the first forward year, though the record of when the dividend rate changes is not always consistent among previous years. Thus, historical experience of a utility could imply that the dividend rate would, most likely, change at a point within the forward year so that 3 of 4 quarterly dividends within the year are at the higher rate. Hence, the estimated growth rate is applied to 3 of the 4 quarterly dividends. On the other hand, the implication of history pattern in dividend increases over recent years may suggest that the higher dividend rate is applicable to only 1 of the 4 quarterly dividend payments of the forward year. In any event, I believe that the point made by Dr. Woolridge—that as an approximation only one-half the growth rate should be used in the determination of the forward year dividend—is an appropriate and a fair approximation, equivalent in intent to the procedure that I apply. For a utility, the actual change in the quarterly dividend rate may deviate from historical

pattern, and thus the result of my approach, or of the result obtained by applying the one-half growth rate rule. Nonetheless, the one-half growth rate rule is an appropriate approximation to determine the forward-year dividend rate, and I do not take issue with it.

Q. WHAT IS YOUR VIEW AND ADVICE TO THE COMMISSION REGARDING THE SHORT-TERM DEBT COST RATE FOR DETERMINING RETAIL PRICES WITHIN THE IMMEDIATE DOCKET?

A. The Company's proposed short-term debt cost rate is determined by the commercial terms of the Company's short-term credit facility with Bank of America, and varies with the one-month London Interbank Offer Rate ("LIBOR"). In turn, the pattern of LIBOR appears to vary closely though not uniformly with that of the U.S. Fed Funds interest rate, which is the short-term interest rate at which U.S. commercial banks lend funds among themselves. Historically, the one month LIBOR has been, on average, 18 basis points above the Fed Funds interest rate, though this spread varies from a -3 to +130 basis points, for the 1992 – 2007 period,. Accordingly, the approach that we recommend to the Commission is to determine LIBOR on the basis of the Fed Funds rate plus the 18 basis point spread. To this interest rate is added the 90 basis point spread charged by the Company's bank, as defined by the terms of the line of credit, as well as other charges associated with the Company's short-term debt facility.

For setting retail electricity prices, the Commission should adopt a short-term debt cost rate that reflects the cost of short-term funds over the timeframe in which the retail prices are likely to be in place. The Federal Funds rate during late-December 2007 is representative of the likely range of the Federal Funds interest rate over this timeframe. Hence, I recommend that the Commission adopt the late-December 2007 Fed Funds rate as the basis to determine the appropriate level for LIBOR, and the cost rate for the Company's short-term debt. The late-December 2007 interest rate for Fed Funds is close to the observed fed funds rate over the period 1992-forward, and is thus a reasonable approximation of the cost rates that the Company will be charged for short-term debt in the timeframe over which the retail prices will be in effect.

Q. HAS THE COST OF CAPITAL CHANGED FROM 2006 TO 2007?

A. Not in any significant way. Changes in interest rates and levels of inflation are indicative of changes in the cost of capital, holding perceptions of risks and the demand for capital unchanged. While the average federal funds rate rose from 4.87% to 4.94% from 2006 to 2007, BAA bonds remained unchanged at 6.48% over the same period. However, 10-year Treasury bonds declined from 4.79% in 2006 to 4.63% in 2007. As has been brought out in my deposition, the fed funds target interest rate declined to 4.25% by year end 2007, from 5.25%. On the other hand, inflation in 2007 rose rather significantly from about 2.5% in 2006 to 4.0%., though inflation indexed securities ('TIPS") of the U.S. Treasury

have remained virtually unchanged in 2007, with respect to 2006. At the international level, the recently released U.S. World Bank review of interest rate spreads for developing economies suggest that, for many regions, financial risks have declined during 2006 and 2007, from 2005 and earlier.

Q. SHOULD HISTORICAL RETURNS TO CAPITAL RISK PREMIA BE ASSESSED ACCORDING TO ARITHMETIC OR GEOMETRIC METHODS?

A. It depends on the application, and how the data are utilized. Most economists agree that, for assessment of risk premia spreads, that the better way to approach it is to assess arithmetic differences. If, on the other hand, the question is what have been realized returns to capital over an extended timeframe, outside the context of premia measurement, my view is that geometric measurement of returns is the better indicator for that purpose. However, it is common to reflect returns both ways and, for this reason, my exhibits reflect realized returns for the companies within the electric utility and natural gas samples by applying both arithmetic and geometric methods, and for multiple periods.

Q. CAN YOU PLEASE COMMENT ON THE CAPITAL ASSET PRICING MODEL AND RELIANCE UPON INDIVIDUAL COST OF CAPITAL ESTIMATES, USED IN ISOLATION?

A. The problems associated with the estimation of the cost of capital with Capital Asset Pricing Model ("CAPM") arise for reasons having to do with the assumptions underlying the CAPM specification as a whole, and obtaining reliable estimates of β as the sole measure of the relevant risks.

The traditional CAPM, which describes stock returns solely on the basis of an estimate of β, is based on the assumption that all market participants share identical subjective expectations of mean and variance of the return distribution, and the portfolio decision is exclusively based on these moments. However, empirical evidence suggests that the estimated CAPM does not conform to the theory. It has been observed by Engle (1982) and Bollerslev (1986) that return distributions vary over time. In other words, the stock return distribution is time variant in nature and hence, the subjective expectation differs from one period to the next. This can be interpreted as saying that investor expectations of the moments of the *ex ante* distribution of returns behave like random variables rather than as constants, as assumed in the traditional CAPM. The result of this modification of the assumptions in the CAPM has led to the specification of conditional CAPM ("CCAPM") formulations that attempt to account for the fact that both the expected value and the variance of returns may be time varying. A review of these studies finds that the accurate prediction of future market returns, within the CAPM framework, remains elusive.

The lesson to be taken from shortcomings associated with the theoretical development of CAPM, and estimation of the market-based returns using a single-factor CAPM formulation, is that there exists a substantial level of uncertainty in the resulting estimates. Therefore, strong adherence to the classic CAPM framework, in the absence of other approaches is not advisable. But CAPM should not be singled out; each of the several approaches, as members of, should we say, the cost of capital toolbox, has limitations. As a practical matter, it is thus appropriate to draw upon multiple methods anchored in historical experience. In closing on this topic, my view is that other approaches referred to as arbitrage pricing theory ("APT") and factor models, coupled with the simulation of future possible states of right-hand-side variables drawn from correlated distributions of historical experience, may be a better and more complete methodologies.

Q. CAN YOU PLEASE COMMENT ON THE USE OF SO-CALLED *EX-ANTE* RISK PREMIA IN THE DETERMINATION OF THE COST OF EQUITY CAPITAL?

A. Yes. For some time, economists have observed that realized historical market returns do not appear to comport with economic theory. The issue was formalized in the 1985 discussion paper by Rajnish Mehra and Edward C. Prescott, "*The Equity Premium, A Puzzle*", which I included in the collection of documents and reports provided to all parties in the immediate docket. The Mehra-Prescott paper precipitated a substantial body of further work, some of

which is cited by Dr. Woolridge that explores the reasons why observed historical realized returns and risk premia, repeatedly and over extended timeframes, depart from the level suggested by economic theory, at least the formulation of utility theory and preference toward risk set forth by Mehra and Prescott. Essentially, so-called Puzzle Research is a well known and has been studied extensively. Two general threads of this research include a so-called behavioral approach (see article on this topic which appeared recently in the *Journal of Economic Literature* "Disagreement and the Stock Market" by Hong and Stein, 2007 that explores historical returns with different models and assumptions about investor behavior. A second approach is the application of economic simulation methods where the projections of returns are developed from exogenous data, including historical returns and other financial market information.

At this point, my perspective on this issue is that no clear viable solution to the "Puzzle" is present. As a result, I suggest that the Florida Public Service Commission, for the purpose of determining the cost of equity and the allowed rate of return, utilize risk premia and returns that are drawn from historical experience exclusively. One of the most useful compendium surveys of the puzzle research literature is that of Richard Derrig and Elisha Orr, "*Equity Risk Premium: Expectations Great and Small*". They (Derrig and Orr) summarize at several places of this substantial survey and, emphasizing the dichotomy, at one point state:

"In a curiously asymmetric way, there are no serious studies yet concluding that the historical results are too low to serve as *ex ante* estimates. Although both groups have made substantial and provocative contributions, the behavioral models do not give any ex ante ERP estimates other than explaining and supporting the historical returns. Although both groups have made substantial and provocative contributions, the behavioral models do not give any ex ante ERP estimates other than explaining and supporting the historical returns. We presume, until results show otherwise, the behavioralists support the historical average as the *ex ante* unconditional long-run expectation."

One of the two original researchers (Mehra) is quoted by Derrig and Orr as stating:

"Before we dismiss the premium, we not only need to have an understanding of the observed phenomena but also why the future is likely to be different. In the absence of this, we can make the following claim based on what we know. Over the long horizon the equity premium is likely to be similar to what it has been in the past and the returns to investment in equity will continue to substantially dominate those in bonds for investors with a long planning horizon."

In summary, I advise the Commission to rely on historical measures of historical market returns and risk premia for purposes of determining the cost of equity capital.

Q. WHAT IS YOUR RECOMMENDATION AND GUIDELINE TO THE COMMISSION FOR DETERMINING THE HISTORICAL MARKET RETURNS AND RISK PREMIA?

I should mention that, to the degree that the Commission exclusively relies on historical market returns— which is my recommendation and view—that caution is the word for assessment of historical returns. Specifically, it is essential that historical returns be gauged in a manner that is consistent with the context. Historical equity risk premia are reported in a number of ways including arithmetic and geometric returns, nominal and real returns, for short- and long-term timeframes, and with respect to short-, intermediate-, and long-term future timeframes. In addition, some of the research and estimates of historical returns are viewed as conditional and other research as unconditional. The various articles including surveys of historical returns as well as simulations of future returns are laced with measurement differences along these dimensions. Comparability of study results can be problematic; historical risk premia across studies cannot be accurately gauged without having ensured a comparable basis of measurement.

Q. CAN YOU PLEASE COMMENT ON BOND RETURNS AND BOND YIELDS?

A. For some period, the determination of *ex post* returns on bonds, including Treasury securities and bills, incorporates the realized interest income as well as the gains and losses in the market value of the securities. If bonds are held

to maturity, the realized return is referred as the yield to maturity, and may be substantially different from stated yields published at some point in time. Over long timeframes, the month-by-month stated yields closely approximate the income return component, for Treasury bond securities.

Q. DR. WOOLRIDGE INDICATES THAT THE SIZE PREMIA ASSOCIATED WITH VERY-SMALL SIZED EQUITIES SHOULD NOT BE UTILIZED TO DETERMINE THE COST OF EQUITY CAPITAL. WHAT IS YOUR VIEW ON SIZE PREMIA?

A. A substantial level of empirical work substantiates the existence of size premia for the U.S., and also for emerging world markets though the evidence regarding non-U.S. markets is certainly less complete. Size premia is well-recognized, and the remaining questions focus on the underlying reasons.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes it does.