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Electronic Filing

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b. Docket No. 080006-WS

In re: Water and Wastewater Industry Annual Reestablishment of Authorized Range of Return on Common Equity for Water and Wastewater Utilities pursuant to section 367.081(4)(f), F.S..

c. Document being filed on behalf of Office of Public Counsel

d. There are a total of 22 pages.

e. The document attached for electronic filing is Citizens' Brief.
(See attached file: 080006 Citizens Brief.sversion.doc)

Thank you for your attention and cooperation to this request.

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FPSC-COMMISSION CLERK

11/7/2008

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In Re: Water and Wastewater Industry)
Annual Reestablishment of Authorized) Docket No. 080006-WS
Range of Return on Common Equity for)
Water and Wastewater Utilities pursuant) November 7, 2008
to section 367.081(4)(f), F.S.)
_____)

CITIZENS' BRIEF

Pursuant to Prehearing Order PSC-08-0702-PHO-WS issued October 21, 2008, the Citizens of Florida, through the Office of Public Counsel, submit this brief.

OVERVIEW

The leverage formula methodology adopted in 2001 produces results which do not make sense today. Long term treasury interest rates dropped by about 95 basis points since the methodology was adopted in 2001, yet the formula produces a cost of equity for a company with a common equity ratio of 40% which is 133 basis points higher than produced in 2001. Tr. 88-89. This result does not make sense because the cost of debt and the cost of equity generally move in the same direction. Equity and debt both compete for investment funds, so that if the rate paid by one, such as debt, drops, so does the rate for the other.

The testimony of James A. Rothschild identifies the cause of the inconsistency in the existing leverage graph formula *and* provides a solution. The cause is the use of short term growth rates in the CAPM model. The use of sustainable, long term growth rates, as proposed by Mr. Rothschild, fixes the problem and produces consistent results where the cost of debt and the cost of equity move in the same direction. The CAPM result using the current methodology is inconsistent with the changes in the interest rate

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and inconsistent with the DCF result. Exhibit 47, page 49.

Another issue with the current formula is that it is computing much wider swings in the cost of equity for different equity ratios than it did back in 2001 when it was adopted. In fact, according to the formula proposed by staff, the swing in the cost of equity for different equity ratios would be almost two and a half times what it was in 2001. The cause of this anomaly is that the existing leverage graph calculation doesn't change the cost of debt at different levels of common equity in the capital structure. The proposal by Mr. Rothschild solves this anomaly by taking into account the change in the cost of debt at different equity ratios.

The cost of equity adders included in the current leverage graph are inappropriate. The bond yield adder amounts to a double count, because what this adder measures is already measured by the leverage formula. There should be no adder for private placement compared to public placement because borrowers self-select their debt issuance choice to minimize financing costs. And both financing theory and empirical evidence show that there is no additional small utility risk premium in addition to what is already measured by the models for risk. On the other hand, an adder which should be included in the second stage of the DCF model is the increment of growth caused by the sale of new common stock above book value. Tr. 59-60. This adder could just as easily be thought of as inherent part of the DCF model. Exhibit 47, page 61.

The cost of equity of 12.67% which the formula proposed by staff calculates for a company with a 40% equity ratio is far too high. The appropriate return on equity to allow to a water or wastewater company with a common equity ratio of 40.0% is

10.53%; at an inefficient equity ratio of 100%, it is 6.52%.

Issues and Positions

ISSUE 1: What is the most appropriate model or method to estimate a fair and reasonable return on a water and wastewater (WAW) utility's common equity capital?

Position: * A two-stage DCF model and a CAPM model based on the actual long-term relationship between inflation and the earned risk premium is an appropriate method to estimate a fair and reasonable return on a water and wastewater (WAW) utility's common equity capital. *

Discussion: Since establishing the current leverage graph methodology in 2001, the Commission has relied on DCF and CAPM financial models using an index of natural gas companies to act as a surrogate for the risks faced by Florida water and wastewater companies. Exhibit 2, staff recommendation dated May 8, 2008, at page 2. The reason for the use of a surrogate is two-fold. First, relatively few water and wastewater utilities have actively traded stocks. Second, of the available actively traded water and wastewater stocks, the utilities are heavily influenced by regulation in one state (California) and by merger activity. *Id.*

These very problems were evident in the water and wastewater companies selected by Utilities Inc. witness Ahern to use as surrogates for risk characteristics. In formulating her cost of equity recommendation, she applied a version of the DCF method to a group of six water companies. Exhibit 15, page 1. Value line reports for these companies are found in Exhibit 42 at pages 31 through 36. The Value Line report

for two of the companies used by Ms. Ahern -- SJW Corporation and York Water -- do not contain the forecast data that is required to apply the DCF method used by the Commission. Exhibit 42, pages 34 and 36. Of the remaining four companies selected by Ms. Ahern, three have the majority of their regulated water operations in only one state --- California. The companies selected by Ms. Ahern therefore exhibit the very characteristics that led the Commission reject the use of publicly traded water and wastewater companies, and instead use a comparative group of gas companies as a surrogate for the risk characteristics of Florida water and wastewater companies. Little weight should be given to her analysis of these companies. See Tr. 93.

Although Citizens' witness Rothschild has some differences of opinion regarding the DCF and CAPM models used by staff, those differences do not extend to the use of DCF and CAPM as appropriate financial models, nor do the differences extend to the use of the comparative group of gas companies for his analyses. Mr. Rothschild used the same comparative group of gas companies as a surrogate for the risk characteristics of Florida water and wastewater companies, even though the gas industry tends to be a bit more risky than the regulated water industry. Tr. 92-93, 95, 155.

The size of a Florida water or wastewater utility, compared to the size of the gas companies in the comparable group of companies, does not affect the appropriate return on equity because size is a diversifiable risk. Tr. 94, 98. Diversifiable risks can be substantial, but the risk can be eliminated by the use of a diverse portfolio. As a result, the financial markets arbitrage out that risk, so there's no extra return provided for it. Tr. 100. Because the marketplace for investments is competitive, an investor

who might choose to make a non-diversified investment will be exposed to a higher risk than those who invest in diversified portfolios, but will not receive one cent of extra return for taking that kind of risk. Tr. 124, 128. Small water companies generally don't have as much total capitalization as large publicly traded water companies but that doesn't mean that they're more risky. Tr. 134. The risk is eliminated through the use of diversification.

The leverage graph model should therefore not increase the allowed return on equity on account of risk characteristics that can be diversified. If there are characteristics that would make an individual company particularly different from the average proxy group, then the company is free to make the argument that the leverage graph should not apply to it. Tr. 98, 135-136, 142-144.

The DCF Method

The DCF recognizes that investors who buy a stock do so to receive cash dividends and/or capital gains in the future, considering the time value of money. Tr. 61-62. An investor parts with his or her money to receive dividends and then sells the stock to someone else. The price the new owner is willing to pay for the stock is related to the future flow of dividends and future selling price he or she expects to receive. The value of a company is recognized to be the discounted value of all future dividends continuing until the stock is sold, plus the value of the stock sale proceeds when it is eventually sold. Tr. 63. This is called the complex, or two stage, DCF model. Tr. 65.

It is not always necessary to use the complex form of the DCF method. If the best estimate for future growth in earnings, book value, dividends and stock price is the same estimate, the complex formula becomes mathematically identical to the answer

obtained by the equation $k = D/P + g$, where k is the cost of equity, D/P is the dividend yield, P is the stock price, and g is the growth in earnings, dividends, book value and stock price expected by investors. Tr. 65, 66.

The current leverage graph formula uses a two stage DCF methodology to estimate the cost of equity for the comparable group of gas companies. Citizens believe that for the most part, this component of the formula is sound. The DCF method applied to the gas companies separately discounts the forecasted dividends and the future expected stock price based upon anticipated retention of earnings. Tr. 38.

In contrast to the two-stage DCF methodology used to separately estimate return on equity, staff also uses a single stage DCF to measure the risk premium component of the CAPM model. The methodology used in the single stage DCF is an area of sharp disagreement between staff and citizens. The use of short term growth rates in the single stage DCF model produces unreliable, inconsistent results by using unsustainable, short term growth rates in a single stage DCF model. The use of a single stage DCF model only makes sense if a long-term, sustainable constant growth rate is used. Tr. 39. If the growth that's measured is an unsustainable growth, it will overstate or understate, depending upon the characteristics at the time, the true cost of equity. Tr. 126.

The CAPM Method

The capital asset pricing model is a method used for calculating the cost of equity for a stock by adding a risk premium to a risk free rate. The risk premium appropriate for a group of companies is proportional to the "beta" of that group. Tr. 75. The risk premium is the return that investors demand to take on additional risk. The risk

premium can be the difference between any financial instrument in different risk categories such as the difference between U.S. Treasury bonds, corporate bonds, preferred stock or common stock. Tr. 77.

The CAPM approach incorporates a DCF calculation to estimate the market risk premium component. This DCF calculation used by staff in the CAPM approach is different from the DCF calculation used to independently estimate the cost of equity for the comparative gas companies. The DCF method applied to the comparative gas companies uses a two-stage approach whereby growth in the second stage is quantified using the retention growth ($b \times r$) method. While the CAPM method is also dependent upon a DCF result to compute the risk premium, growth in the CAPM implementation of the DCF method is not based on the two-stage approach, but is instead computed by Staff by averaging the five year growth rate in dividends and earnings forecast by Value Line to occur between the average of the three most recent historic years and a three year period in the future. Tr. 46.

These historical to short-term future five-year growth rates are not the kind of growth rate applicable for use in the DCF formula because they are not long-term sustainable growth rates. Growth rates from any base period are subject to distortion depending upon how atypical the three-year average base period is compared to what is expected for the future. When Value Line advises investors what total return to expect for the future, it does not add these short term growth rates to the dividend yield as it would do if it believed those growth rates to be credible in a DCF approach. Tr. 46-47.

There are a number of indicators showing that the DCF model using short term earnings forecasts is producing erroneous returns on equity. When the results from Staff's recommendation of the DCF that it used in its CAPM method are graphed against the beta for 650 of the 657 companies used by staff in its analysis, it looks like a "shotgun shot," indicating that there is, at best, a very loose correlation between risk and return. Tr. 47; exhibit 8.

In addition, a DCF trendline on the beta graph is upward sloping, but the slope of the line is way too gradual. In fact, if the line is projected to the point where a riskless security, such as U.S. treasuries, would be expected to appear (with a beta of zero), the graph defined by these simple DCF model results would conclude that a riskless security should be expected to yield a return of approximately 11%. Since all U.S. treasuries, regardless of term, are currently yielding far less than 11% the DCF method using short-term earnings and dividends to compute growth is currently materially overstating the cost of equity. Tr. 48. The Commission should not rely on a DCF methodology which implies that the return for a riskless security is 11%.

In order to determine the risk premium to use in his CAPM model, Mr. Rothschild compared the actual compounded annual returns earned by each of ten groups of companies from 1926-2007 with an average beta of each group. In this way, he examined the returns of ten different portfolios, each with a different average beta. Companies with a beta of 1.0 earned a compounded annual return of 10.40% for its equity investors. The average beta for the comparative gas companies chosen by the used by Staff in Docket No. 080006-WS is 0.88, indicating that the non-diversifiable risk for these gas companies is 88% of the average risk. The least squared equation

indicates that the earned return to stockholders who invested in a portfolio with a beta of 0.88 earned a compounded annual return of 9.72% from 1926-2007. Tr. 78-79.

The 10.40% compounded annual average historical actual return earned by companies with a beta of 1.0 and a 9.72% historical actual return earned by companies with 0.88 occurred over a time when the compound annual rate of inflation averaged 3.0%. However, the current inflation expectation demanded by investors is 2.65%, or 0.35% lower than the inflation rate embedded in the historical actual return numbers. Exhibit 6, page 1. Therefore, to make the historical returns consistent with investors' current inflation expectations, the 9.72% should be reduced by 0.35%. This 9.72% return adjusted for the current inflation expectation results in a 9.37% CAPM indicated cost of equity for electric companies with a beta of 0.88. Tr. 79.

The 9.37% CAPM result is consistent with both Mr. Rothschild's DCF result of 9.42% to 9.43% and staff's DCF result of 9.68%. While staff's DCF result is reasonably close to the results Mr. Rothschild obtained from both the DCF and CAPM approaches, a large part of the difference is attributable to staff's allowance for financing costs. Tr. 78-79.

Ms. Ahern, the witness for Utilities Inc., argues that an arithmetic mean of past returns should be used when estimating the cost of capital because it captures the effect of changing economic conditions on risk premiums over time. Tr. 197. She is incorrect, however, because simply knowing the arithmetic average says absolutely nothing about how risky an investment may be. For example, if the arithmetic average return over 6 years was 10.0%, merely knowing this does not provide any information if the 10% annual average return was obtained from an investment that earned exactly

10% in each of the six years, or from an investment that earned 0% in 3 years and 20% in three years, or if the 10% average return was earned in any one of a number of different ways. In fact, merely knowing that the arithmetic average return averaged 10% for six years is such a misleading number that it does not even tell anyone if there was a total profit or total loss over the six years. Tr. 239.

Further confirmation about the inappropriateness of using arithmetic mean in this context is shown by a Wall Street Journal article entitled "Financial Advisers and Fuzzy Math." According to this article:

"Some financial advisers rely too heavily on a formula known as arithmetic average, which can be misleading when investing for the long term. Financial advisers who use this formula may be overstating your potential profit and leading you to take risks you might otherwise avoid, academics and other financial professionals say.....

The classic example to illustrate the flaws with arithmetic math goes like this: You start with an investment of \$100 and it grows 100% the first year and loses 50% the next year. To calculate the total return using arithmetic math, you would add the returns from both years – in this case 100 minus 50 – and divide them by two, or the number of returns.

That leaves you with the illusion of a 25% profit, when in reality you're right back where you started – with \$100. After rising 100% the first year, you had \$200; but a drop of 50% cut that in half, back down to \$100." Exhibit 44.

Value Line likewise explains that the arithmetic method overstates returns while the geometric averaging method is the correct method. Tr. 238; Exhibit 45. The geometric mean method used by Mr. Rothschild is the correct mathematical technique to use when determining risk. The arithmetic mean used by Ms. Ahern overstates the appropriate return.

ISSUE 1a: Should the leverage formula methodology take into account an individual utility's equity ratio in the determination of return on equity?

Position: * Yes. *

Discussion: Citizens and Utilities Inc. agree that the leverage formula should take into account an individual utility's equity ratio in the determination of return on equity.

Financial risk, which is part of the non-diversifiable risk experienced by a company, goes up as the percentage of common equity in the capital structure goes down. Tr. 49. Modigliani and Miller showed that if it were not for income taxes and bankruptcy risk, the capital structure selected by a company would have no impact on the overall cost of capital. As the common equity ratio increases, both the cost of debt and equity decrease. However, as the cost of equity and the cost of debt decreases, the impact of the lower component cost is fully offset by the increased use of the more expensive equity component. Tr. 50.

ISSUE 1b: Should the leverage formula methodology take into account the change to the cost of debt in response to changes in the level of common equity in a utility's capital structure?

Position: * Yes. This is not only consistent with the same Modigliani & Miller principle that is the basis for the leverage formula, but the relationship between capital structure and cost of debt is confirmed by the actual data associated with the comparative group of companies. *

Discussion: The work done by Modigliani and Miller forms the basis for the

leverage formula used by the Commission. But for income taxes and bankruptcy risk, the overall cost of capital of a company remains the same regardless of the capital structure chosen by the company. Tr. 50. Since (1) the overall cost of capital remains constant over different capital structures, and (2) the cost of equity varies depending on the equity ratio, it necessarily follows that the cost of debt must vary in response to changes in the level of common equity in a utility's capital structure. Not only is this principle consistent with the same Modigliani & Miller principle that is the basis for the leverage formula, but the relationship between capital structure and cost of debt is confirmed by the actual data associated with the gas company comparative group. Tr. 53. The actual relationship between bond ratings and capital structure for the comparative group of gas companies utilized in exhibit 8, page 2, shows that the cost of debt does in fact vary in relation to the equity ratio.

Although Ms. Ahern, the witness for Utilities Inc., agrees that it is "theoretically valid" that the debt cost rate is a function of debt ratio, with debt cost rising as the debt ratio rises (Tr. 175), she then argues, contrary to theory, that it is "reasonable" to assume that the debt rate is constant over a common equity ratio range of 40% to 100%. Id.

Rather than merely assign the same cost of capital to all water and wastewater utilities, the concept behind the leverage formula starts out by recognizing that companies use different capital structures. Because companies use different capital structures, even if the overall cost of capital were the same from company to company, the cost of equity will be different because of variations in the capital structures actually used. In other words, two water companies that both have the same business risk will

have different financial risk if they use different capital structures. According to the Modigliani/Miller principle, as the percentage of common equity goes up, financial risk goes down such that both the cost of debt and the cost of equity go down. Tr. 220-221. In order to get the right result, the varying cost of debt must be modeled into the determination of the leverage formula. When computing the overall cost of capital for a particular company, both the cost of equity derived from the leverage formula that is consistent with the subject company's capital structure and the actual embedded cost of debt of the subject company must both be used. Tr. 225-226.

ISSUE 1c: Should the determination of the leverage formula be based on a before-tax or after-tax cost of capital?

Position: * The determination of the leverage formula should be based on a before-tax cost of capital. This will provide the cost of equity as experienced by equity investors. *

Discussion: It is important that the Commission use the before-tax cost of capital so that customers are not harmed by excessive use of equity in the capital structure of the water and wastewater utilities.

If the goal of the Commission is to compute the cost of equity as experienced by the equity investors, the overall cost of capital that should be held constant is the one determined prior to consideration of income taxes. Absent a showing of why a particular company cannot finance its rate base with a reasonable amount of debt, a company is only entitled to charge ratepayers for a leverage formula determined cost of capital that considers the real world impact of taxes. If there is a company with a

special situation that could explain why it is appropriate for it to use an excessively high level of common equity in the capital structure, it could ask the Commission to give it a return in excess of the amount determined by the leverage graph. Without such a showing, it would be inappropriate to charge ratepayers the higher cost of an inherently inefficient capital structure. Tr. 53-54.

If the Commission does not use the before-tax cost of capital, the leverage formula would fail to include the effect of income taxes. In such a case, the capital structure selected by the company would not be indifferent to ratepayers. Tr. 55. According to Modigliani and Miller, there is theoretically an optimal capital structure when income taxes are taken into account. If a company uses too much or too little equity, then there is an inefficiency. Tr. 151-152.

An inefficient capital structure using an excessive amount of equity would produce an overall cost of capital harmful to customers. Management has a responsibility to implement an efficient capital structure. If a company does not implement an efficient capital structure, customers should not pay the resulting extra cost. Use of a before-tax capital structure will put pressure on management to use an optimal capital structure with the correct amount of equity. Tr. 152-153.

As an example, if the Commission adopts the leverage formula urged by Citizens, a water and wastewater utility with a 60 percent equity ratio would receive an authorized return on equity of 8.46 percent. The authorized return on equity of 8.46 percent should be understood as a number that recognizes that a 60 percent common equity ratio would be inefficient because it does not provide sufficient tax benefits, as would a capital structure using more tax-deductible debt. As a result, the number that is

appropriate to protect ratepayers is lower. Exhibit 47, page 76.

Regulation should be a substitute for competition. In the world of competition, if a company uses an inefficient capital structure and the competition is using an efficient capital structure, the one using the inefficient capital structure will not earn as high a return. Tr. 153. Use a before-tax cost of capital in the leverage formula provides this result; use of an after-tax cost of capital will not.

ISSUE 1d: Is it appropriate to make a Bond Yield Differential adjustment? If so, how should this adjustment be made?

Position: * No. The cost of debt increases when a company uses a higher proportion of debt. This higher interest expense is exactly the same factor that causes an increase in the risk experienced by the equity holders, which is what the leverage already formula measures. The adjustment is therefore a double-count. *

Discussion: The bond ratings issued by the major bond rating agencies are generally consistent with the risk of investing in a bond as perceived by bond investors. While numerous factors go into the determination of a bond rating, important factors such as the coverage ratio and internal cash generation are influenced by the capital structure, i.e. the degree of leverage used by a company. When a company increases the percentage of total financing done by debt, the interest expense goes up. Also, because of the higher interest expense and the fewer dollars of equity, both the income available to equity and the associated income taxes goes down. Higher interest expense, lower income available to common shareholders, and lower income taxes all result in a lower coverage ratio. This is why the cost of debt incurs upward pressure

when a company uses a higher proportion of debt in the capital structure. This higher interest expense is exactly the same factor that causes an increase in the risk experienced by the equity holders. The increase in the risk experienced by the equity holders is exactly the same risk that the leverage formula is measuring. Therefore, adding a factor for the anticipated higher cost of debt is a double-count. Tr. 57-58, 245-246.

Exhibit 11, page 2 of 2, shows that when there is a lower amount of equity in the capital structure of the comparative group of gas companies, the bond rating of the company is lower. This empirical evidence confirms that no additional bond yield differential should be made, because increased risk from a higher proportion of debt in the capital structure is already reflected in the bond rating of the company. See Tr. 58.

ISSUE 1e: Is it appropriate to make a Private Placement Premium adjustment? If so, how should this adjustment be made?

Position: * It is not appropriate to make a private placement premium adjustment. Borrowers self-select their debt issuance choice to minimize financing costs, so there is no premium paid for private placement. *

Discussion: There are a sufficient number of investors such as retirement funds and life insurance companies that plan to hold an investment to maturity that there is no reason to expect a private placement premium. Tr. 59.

A working paper entitled "Financial Contracting and the Choice between Private Placement and Publicly Offered Bonds" dated November, 2004, by Simon H. Kwan of the Economic Research Department of the Federal Reserve Bank of San Francisco and

Willard T. Carleton of the Department of Finance at the University of Arizona, concluded

“Finally, we find evidence that borrowers self-select their debt issuance choice to minimize financing costs. However, switchers that issue debt in both markets do not realize significant cost savings by issuing bonds in the private market.” Tr. 59.

The evidence provided by Mr. Rothschild shows that the private placement alternative is selected not as a mechanism for higher cost, but is used when the borrower perceives an opportunity to experience a lower cost of debt. Tr. 59-60. The testimony presented by Ms. Ahern, on the other hand, provides no evidence that a private placement premium even exists. Tr. 247.

ISSUE 1f: Is it appropriate to make a Small-Utility Risk Premium adjustment? If so, how should this adjustment be made?

Position: * No. First, not all companies to which the leverage formula could be applied are small. Second, financial theory explains why there shouldn't be a small company premium, and empirical review of financial data shows that financial theory is correct: there is no small company premium. *

Discussion: According to financial theory, investors demand compensation only for the risk a company has in relation to the overall market. Exhibit 6 shows that small companies have provided higher returns since 1926, but that can be explained by higher betas of such companies. The exhibit shows 10 groups of companies, each grouped according to size. Since the data indicates that if a small company has a lower beta it would also have a lower expected return, there is no reason for a small company to require a higher return just because of its size. Tr. 60.

Data showing that whatever risk small firms have in comparison to large firms is already expressed in the firms' beta. In other words, small firms on average have higher betas than large firms. This is an important distinction because it means that whatever effect on risk that is brought about by size, it is already captured by beta. It also means that since regulated utility companies do not have unusually high betas, if there is a small firm effect, it is offset by other risk reducing characteristics inherent in utility companies.

Risks typically faced by small firms would not be replicated for a regulated public utility. An unregulated small firm is more likely to have one or only a few key products that could be subject to obsolescence or could be vulnerable to attack from a larger and more powerful competitor. However, regulated water and wastewater utility companies need not fear competition because they have the protection of territorial monopolies and because they have products that have no chance of becoming obsolete. Tr. 248.

The average size of an average water or wastewater company in Florida is much smaller than the size of the gas companies in the comparative group. But size doesn't influence the cost of equity. For example, you could have a pension creating a diversified portfolio. Theoretically, such a pension fund could invest in 50, 100, or 150 different small water companies. From the perspective of the pension fund, its overall investment in the water business is very well diversified. It is as diversified as a large company, or as a very large company, so it creates a benefit from diversification. With diversification, the size of the company per se does not matter. Exhibit 47, page 65.

Water companies tend to be even lower in risk than gas companies. The use of this group results in a conservatively high cost of equity. Exhibit 47, page 66.

ISSUE 2: Should the following leverage formula methodology be applied using updated financial data:

$$\text{Return on Common Equity} = 7.36\% + 2.123/\text{Equity Ratio}$$

$$\text{Where the Equity Ratio} = \frac{\text{Common Equity}}{(\text{Common Equity} + \text{Long Term Short-Term Debt})}$$

Range: 9.48% @ 100% equity to 12.67% @ 40% equity

OPC: * No. Instead, the leverage formula methodology proposed by Mr. Rothschild should be applied using updated financial data.

Discussion: The concept of a leverage formula as a way of streamlining rate proceedings for the numerous water and wastewater companies in Florida is a creative, innovative approach. For it to work in a way that is fair to both investors and ratepayers, it must be done properly.

There are problems with the existing leverage graph formula. Specifically, the existing leverage graph formula failed to consider that not only does the cost of equity change as the percentage of common equity in the capital structure changes, but the cost of debt changes as well. Also, the existing formula fails to recognize that the real-world impact of income taxes is a critical part of the proper dynamic in capital structure selection. Completing the task of appropriate implementation of the creative, innovative leverage graph approach requires that these items be fixed. Tr. 251-252.

The leverage formula should take a somewhat different form than was used in

the past. The change is required because the cost of debt as well as the cost of equity changes as the level of common equity in the capital structure changes. Tr. 39.

For the leverage formula to be appropriate, it is critical for the Commission to change the form of the leverage formula it is using so that expected changes in the cost of debt are also captured by the formula. Implemented properly, the leverage formula approach has the potential to provide an efficient mechanism that could result in a fair result for cost of capital. The starting point cost of equity must be based upon soundly applied approaches to the DCF and CAPM. Also, the impact of the capital structure changes must follow Professors Modigliani and Miller's principles, i.e., recognize that capital structure changes impact the cost of equity *and* the cost of debt. Tr. 91, 146-147.

The Commission should use the following leverage formula:

$$K = (OCC - D(1 - ER)) / (ER),$$

where K = cost of equity,

D = Cost of Debt, determined as a percentage of equity in the capital structure,

OCC = Overall cost of capital

ER = equity ratio

ISSUE 3: What is the appropriate range of returns on common equity for water and wastewater (WAW) utilities pursuant to Section 367.081(4)(f), Florida Statutes?

Position: * The range should be calculated using the formula recommended by Mr. Rothschild. The appropriate return on equity to allow to a water or wastewater company with a common equity ratio of 40.0% is 10.53%; at an inefficient equity ratio of 100%, it is 6.52%. *

Dated this 7th day of November, 2008.

Respectfully submitted,

s/ Charlie Beck
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CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a copy of the foregoing Citizens' Brief has been furnished by U.S. Mail and electronic mail to the following parties on this 7th day of November, 2008.

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