

**STATE OF ILLINOIS
ILLINOIS COMMERCE COMMISSION**

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| ILLINOIS-AMERICAN WATER COMPANY |) | |
| |) | Docket No. 09-0319 |
| Proposed general increase in water and |) | |
| Sewer rates. |) | |

INITIAL BRIEF OF THE CITIZENS UTILITY BOARD

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determination. In short, the rather chaotic state of the financial markets must not be used as a basis for excessive “return on equity” (“ROE”) recommendations. Moreover, the Commission should adopt a capital structure that reflects the Company’s actual use of short-term debt. CUB urges the Commission to adopt the capital structure and cost of common equity recommended here for the reasons set forth in this Initial Brief.

II. CAPITAL STRUCTURE

Under the traditional regulatory model, ratepayer and shareholder interests are balanced when the Commission authorizes a rate of return on rate base equal to the public utility’s overall cost of capital, as long as that overall cost of capital is not unnecessarily expensive. ICC Staff Ex. 3.0 at 2. While CUB witness Christopher Thomas did not directly address the Company’s proposed capital structure, he used the capital structure recommended by AG/Joint Municipalities witness Ralph Smith. See CUB Ex. 1.0 at 44. While Mr. Smith accepted the Company’s proposed amount and cost of long-term debt, he recommends the Commission adopt a higher proportion of short-term debt and a lower proportion of common equity than IAWC seeks. AG/JM Ex. 5.0 at 6.

The record shows that in fact IAWC regularly uses short term debt for a variety of purposes, typically as a source of flexible “bridge financing” until the Company puts long-term financing into place. Tr. At 306. Short-term debt is also used for things like cash working capital, that is, the all the disbursements and receipts of the Company run through this account. Tr. At 303.

The question before the Commission, as Mr. Smith succinctly identifies it, is whether a normal level of short-term debt, such as the proportion used in IAWC’s last rate case, Docket

No. 05-0507, should be reflected in the capital structure or whether the Company should be allowed to substitute increased common equity for significantly more expensive short-term debt. AG/JM Ex. 5.0 at 7. If the Company's proposal to increase the level of common equity in its capital structure is accepted, a substantial additional cost to IAWC ratepayers would result. Id. Given the large difference between the pre-tax cost of common equity and the cost of short-term debt, it is more reasonable to use short-term debt to finance the approximately 3.11 percent of IAWC's test year rate base at issue. AG/JM Ex. 5.0 at 8.¹

IAWC obtains both its short-term debt financing and its common equity from its parent company, American Water Works, and projects in this case additional equity infusions of \$8 million and \$20 million in December 2009 and May 2010, respectively. AG/JM Ex. 5.0 at 5, 10. What was financed by short-term debt in IAWC's recent prior rate case is now presumed to be financed with common equity in the presentations of IAWC and Staff, presumably the December and May equity infusions. AG/JM Ex. 5.0 at 11, see also ICC Staff Ex. 3.0 at 5. Short-term debt, as IAWC witness Philip Rungren explained, is the least expensive source of capital. Tr. at 316. If the short-term debt component in the capital structure is increased, typically the overall cost of capital is lower. Tr. at 317.

In this case, the cost of common equity is over ten times more expensive than the cost rate for short-term debt. AG/JM Ex. 5.0 at 12.² Even this significant differential ignores the fact that interest on short-term is tax deductible, while the return on common equity is not. Id. When the pre-tax cost is compared, the differential grows to over 15 times. Id. At Staff's proposed cost of equity and recommended rate base, the shift in rate base financing from short-term debt

¹ The 3.11 percent is the difference between the portion of short-term debt in IAWC's capital structure in its last rate case (Docket No. 07-0507) of 3.26 percent used by the Commission at page 93 of its order in that case, and the 0.15 percent, that IAWC and Staff propose for the current IAWC rate case. See AG/JM Ex. 5.0 at 10.

² ICC Staff has recommended a cost rate for common equity of 10.38 percent and used a cost rate of 1.0 percent for short-term debt. See ICC Staff Ex. 10.0 at 2, 4.

to common equity would cost IAWC ratepayers approximately \$3.217 million per year of revenue requirement in the current case. AG/JM Ex. 5.0 at 14. At CUB's proposed cost of equity, also supported by the AG, and the AG/JM recommended rate base, the revenue requirement impact on IAWC ratepayers is still significant: approximately \$2.2 million. AG/JM Ex. 5.0 at 15. These additional costs are unnecessary, and can be avoided simply by using a normal level of short-term debt in the Company's capital structure.

III. COST OF EQUITY

IAWC has requested a cost of equity capital of 12.25% based on use of the discounted cash flow ("DCF") model, the capital asset pricing model ("CAPM") and two adjustments: a "business risk" adjustment and a "financial risk" adjustment. IAWC Ex. 8.00 (Rev.) at 39. CUB witness Chris Thomas recommends the Commission reject the two proposed adjustments, and instead adopt a 7.44% cost of equity capital based solely on the averaged results of his CAPM analysis (8.03%) and DCF (6.85%). CUB Ex. 1.0 at 39.

The Company's cost of equity is the return that investors demand to choose an investment in the Company over other available investment options. In order to maintain access to capital on reasonable terms, the Company needs to generate fair returns for its investors (which is why the terms "cost of equity" and "return on equity," or "ROE" are often used interchangeably). The U.S. Supreme Court established the framework used to determine an appropriate, or fair, cost of equity for regulated companies in two key decisions: *Bluefield Water Works & Improvement Co. v. Public Service Commission of West Virginia*, 262 U.S. 679, 692 (1923) ("*Bluefield*") and *Federal Power Commission et al. v. Hope Natural Gas Co.*, 320 US 591 (1944) ("*Hope*"). Taken together, the *Hope* and *Bluefield* decisions establish that utilities are entitled to the opportunity to earn a fair return on their prudent and reasonable investment that is commensurate with the returns earned by other firms of comparable risk.

The Public Utilities Act directs the Commission to (1) ensure that the cost of equity used to develop rates fairly compensates investors for their risk, and (2) assure that customers do not pay an excessive or unreasonable return in the utility's rates. 220 ILCS 5/9-211, 5/9-230. In other words, the Commission must give investors the return they require, not the return they prefer.

The Commission's task is to ensure that the cost of equity capital used to develop rates compensates investors for their investment risk, while assuring that customers do not pay an excessive or unreasonable return in those rates. This is a decision made by weighing the relative riskiness of the regulated company against the relative riskiness of other investments, a task complicated by the fact that the measure of a "fair" return changes over time as the debt and equity markets change. In just the past two years, the relevant market changes include a fall in stock prices (as measured by the S&P 500) of more than 50% from the fall of 2007 through March 2009. CUB Ex. 1.0 at 5. Though stocks have rebounded to some extent, as of September 2009 they were still down 33%. *Id.* At the same time, investor demand for shares of low-risk companies such as utilities has increased. *Id.* Yields on risk-free investments, such as ten-year Treasury Bonds, were been below 3% for most of 2009. *Id.*

The problem with using the DCF and CAPM with the inputs the Company proposes is that the limited credit availability that has been endemic of the crisis has been caused by uncertainty in market fundamentals. *Id.* As the financial crisis has made clear, financial information from typical financial industry sources, such as rating agencies, can be dramatically wrong and strongly biased. For example, Lehman Brothers had an "A" bond rating just before the largest collapse in financial history. CUB Ex. 1.0 at 6.

This financial climate – the worst since the Great Depression – requires the Commission to return to basics instead of simply repeating past approaches that ignore very different market

circumstances. While CUB witness Thomas used the same DCF and CAPM models, he adjusted the models, as well as the data inputs used in the models, to reflect the credit crisis and resulting discontinuity in the financial markets. CUB Ex. 5.0 at 9, 27. He also shows why the Commission should reject a “financial risk” adjustment based on one opinion of what IAWC’s debt would be rated at by the Moody’s and S&P analysts. As for the “business risk” adjustment, Mr. Thomas explains why assuming IAWC stock would trade at a level consistent with the market-to-book³ ratios of other sample companies is an invalid assumption, and thus results in an invalid comparison.

a. DCF Analysis

The DCF model estimates the cost of equity capital by assuming that investors who purchase stock are paying a price that reflects the present value of the cash flows they expect to receive from the stock in the future. CUB Ex. 1.0 at 8. Using information about the current stock price and expected future cash flows from dividend payments and earnings growth, the model, which is based on the relationships among various factors, estimates the return that investors expect to receive on their investment. Id. In short, the DCF model assumes that an investor buys stock for an expected total return derived from cash flows (received in the form of dividend payments) plus appreciation in market price (the expected growth rates). Dividend yield on market price plus a growth rate equals the capitalization rate, i.e., the total return rate expected by investors: $k = \frac{D_0(1+g)}{P_0} + g$ where

- k = Investors required “rate of return”, or the “cost of equity capital”
- D_0 = The current dividend payment
- P_0 = The current stock price

³ Market value refers to the value of a company’s outstanding stock as measured by the current stock price and the number of shares outstanding. CUB Ex. 1.0 at 41. Book value is the value of company assets. Id.

- $D_0(1+g)/P_0$ = The expected dividend yield
- g = The expected sustainable growth rate

The actual return required to induce investors to make a particular investment is not a directly observable number because investors' requirements for future dividends and rates of growth cannot be found in the pages of the *Wall Street Journal* and plugged into the model.

CUB Ex. 11. In this case, the analysis is further complicated by the current market upheaval and by the fact that IAWC does not have publicly traded stock, which would provide current, objective dividend and price information. *Id.* Instead, proxy groups of companies are used to estimate the investor-perceived level of risk associated with IAWC, and projections are made as to IAWC's future growth. The goal, as Ms. Ahern succinctly sums up, is to attempt to emulate investor behavior to the greatest extent possible in rate of return analyses, that is, estimate the investors' required return on common equity. IAWC Ex. 8.00R at 4.

There are two fundamental differences between Mr. Thomas' DCF model and that used by IAWC. First, Mr. Thomas uses a more representative sample of companies to gauge the level of risk investors would associate with IAWC. Second, Mr. Thomas uses a multi-stage growth rate analysis to predict how companies compared to IAWC will grow over the next five years.

i. Sample

Comparative samples of other companies are used to estimate the level of risk associated with a given investment, in this case with an investment in IAWC. To minimize the number of distinct inputs that could complicate the Commission's comparative analysis of the ROE estimates in this proceeding, Mr. Thomas used the same sample of 6 comparable water utilities as used by Ms. Ahern. CUB Ex. 5.0 at 11. Because information concerning stock prices and measures of financial performance is not directly available for the Company, it is necessary to analyze a group of companies with comparable risks to estimate the Company's cost of equity.

Id. However, Mr. Thomas noticed that the sample of 26 publicly traded utilities also used by Ms. Ahern does not accurately reflect IAWC's risk. Id. Ms. Ahern's sample is composed of utilities engaged in the delivery of natural gas and electricity that employ, on average, almost 14 times the capital employed by IAWC (see IAWC Ex. 8.01 page 3). CUB Ex. 5.0 at 12. The size and business functions of these companies is not comparable to IAWC and thus not an appropriate basis for comparison when determining the cost of equity capital for IAWC. Id.

ii. Growth Rates

The growth rate component represents the sustainable growth that investors expect in their investment due to expected increases in a company's earnings. CUB Ex. 1.0 at 12. This growth rate must be consistent with, and supported by, the economic conditions and dividend payout policies expected to occur. Id. As discussed above, turmoil in the credit markets creates uncertainty in expectations about the future. In this environment, investors are focused on short-term changes in the equity markets, and as a result, both forecasted and historical growth rate information become highly subjective measures of expected future growth for individual firms. CUB Ex. 1.0 at 9. While it is difficult to predict with accuracy a sustainable constant growth rate for companies, there remain expectations of long-term growth in the U.S. economy, as measured by the historic growth in real gross domestic product (real GDP), is a reasonable expectation. CUB Ex. 1.0 at 10.

To ensure that the cost of equity determined in this proceeding is reasonable in light of this discontinuity, the Commission should base its analysis on three basic supplemental criteria:

1. Earnings growth rate inputs must be reasonable in light of anticipated growth in GDP;
2. The long-term growth rate must not implicitly require continued earnings above the regulated firm's cost of equity, as derived in the analysis; and

3. The long-term growth rates must not require dividend payout ratios that are not consistent with the capital expenditure growth rate and the return on equity.

CUB Ex. 1.0 at 12.

Using current analysts' 3 to 5 year growth projections do not meet these simple common sense tests, something the financial literature has examined in recent years. CUB Ex. 1.0 at 13. Many researchers have found that analysts tend to be optimistic about future growth and produce forecasts that are upwardly biased. *Id.*⁴ This upward bias translates into DCF cost of capital estimates that are above the true required cost of capital. *Id.* Ms. Ahern believes that there is a wealth of empirical and academic literature which support the superiority of analysts' forecasts as measures of investor growth expectations in a DCF analysis, as measured by a 2006 book, *New Regulatory Finance*. IAWC Ex. 8.00R2 at 10 (noting that investment analysts exert a strong influence on the expectations of individual investors who lack resources to make their own forecasts). She goes on to note the 2002 book, *A Random Walk Down Wall Street*, which claimed the upward bias from the late 1990s had diminished. IAWC 8.00R1(Rev) at 13. As final confirmation, she offers a 2003 speech from Lori Richards, Director of the U.S. Securities and Exchange Commission Office of Compliance Inspections and Examinations describing rule changes intended to address analyst conflicts of interest. IAWC 8.00R1(Rev.) at 14.

The simple fact is the analysts' forecasts that Ms. Ahern relied upon are significantly greater than historic internal growth actually experienced by the companies in the water sample.

⁴ A discussion of the financial literature can be found in CUB Ex. 1.0 at 13-14. While Ms. Ahern

| | | Historic Internal Growth (b x r) | | | | | | |
|--------------------------------|------|----------------------------------|-------|-------|--------|-------|---------|--------|
| | | 2004 | 2005 | 2006 | 2007 | 2008 | Average | IAWC* |
| American States Water | AWR | 1.01% | 2.70% | 2.56% | 3.79% | 3.05% | 2.62% | 11.00% |
| Aqua America Inc. | WTR | 4.51% | 4.89% | 3.71% | 3.14% | 2.80% | 3.81% | 8.00% |
| California Water Service Group | CWT | 2.03% | 2.15% | 0.96% | 1.84% | 3.80% | 2.16% | 8.40% |
| Middlesex Water Co. | MSEX | 0.82% | 0.46% | 1.28% | -0.26% | 1.91% | 0.84% | 8.00% |
| SJW Corp. | SJW | 3.60% | 4.64% | 4.24% | 3.39% | 1.92% | 3.56% | 12.50% |
| York Water Company | YORW | 2.04% | 2.90% | 2.08% | 2.69% | 2.12% | 2.37% | 8.00% |
| | | 2.34% | 2.96% | 2.47% | 2.43% | 2.60% | 2.56% | 9.32% |

* IAWC Ex. 8.09 Page 1

CUB Ex. 2.0 at 4.

The dramatic difference between historic growth and the forecasts made by analysts further supports the use of historic internal growth in the DCF model. *Id.* Ms. Ahern has failed to demonstrate how the Commission can possibly accept an analysis which anticipates that companies in the sample of comparable companies will grow at a rate that is 260% greater than they have in the past. *Id.* To put it simply, there is no evidence to suggest that such a radical change in growth is sustainable or that it is a reasonable expectation to use when setting rates for regulated water utilities.

The historic internal growth method used by Mr. Thomas relies on historic earned rates of return to determine expected future sustainable growth which is not inherently circular as Ms. Ahern argues. CUB Ex. 2.0 at 5. Instead, it is a simple recognition that past growth is the best proxy for future growth. *Id.* This information, widely available to investors, forms a sound assumption for the Commission in estimating IAWC's growth. In short, Ms. Ahern attempts to argue that historic growth rates are significantly influenced by discontinuity in the equity and

credit markets, but somehow security analysts' expectations of the future are not so influenced. This is simply not true. As demonstrated in the chart above, it is clear that the average internal growth rate for companies in the sample group was relatively stable from 2004 through 2008. CUB Ex. 2.0 at 6. However, analysts are forecasting future growth that is 260% greater than this relatively consistent historic level. *Id.* Given this, it is the analysts' growth forecasts that appear to be suspect. *Id.*

Finally, while Ms. Ahern is correct that real GDP growth does not evaluate the effect of inflation on GDP, that is insufficient reason for the Commission to exclude it from their analysis. CUB Ex. 2.0 at 6. Rather than underestimate expected future growth, as Ms. Ahern argues, Mr. Thomas has already assumed that growth for the sample companies will increase 35% above its historic level (from 2.56% to 3.47%) by relying on historic real GDP growth as the final stage in the multi-stage DCF analysis. *Id.* Ms. Ahern projects growth rates of 75% without demonstrating how such growth could be achieved or sustained by the sample companies. CUB Ex. 2.0 at 7. The Commission should not accept this projection without the required evidence demonstrating how such growth can be sustained.

Fundamentally, when setting rates, the Commission has to take a long-term view of the capital markets. Overreliance on short-term conditions could result in allowed returns above the cost of equity. There is no question that short-term uncertainty might potentially increase costs; however, the Commission's task is to determine that the allowed rate of return on common equity for regulated companies like IAWC is sufficient for the period that rates will be in effect.

b. CAPM Analysis

The CAPM is an alternative analytical tool commonly used in regulatory proceedings to estimate investors' required rate of return, or the cost of equity capital for the firm. CUB Ex. 1.0

at 25. For a utility, the investors' required rate of return is the risk-free rate plus the value of the non-diversifiable risk (essentially, risk inherent in the marketplace) that investors take on by investing in the utility. CUB Ex. 1.0 at 26. The amount of that non-diversifiable, or market risk that investors are exposed to through their investment in a particular firm's shares is measured by a "beta coefficient." Id. In its mathematical form, the CAPM model is **$k = R_f + B(R_m - R_f)$** :

- **k** = Investors' required rate of return, or the cost of equity capital;
- **R_f** = The risk-free rate of return;
- **B** = Beta, a representation of the relative correlation between the market and the security or industry being analyzed, where 1.0 is perfect correlation;
- **R_m** = The market return; and
- **(R_m-R_f)** = The expected market risk premium ("EMRP"), or the market return in excess of the risk-free rate.

The key assumptions of the CAPM are that (1) in the market, investors are compensated only for non-diversifiable risk, quantifiable as a uniform Expected Market Risk Premium ("EMRP"), and (2) beta is an accurate measure of the relative risk of an individual security when compared with the overall market. CUB Ex. 1.0 at 26. CAPM is generally best employed as a check of the DCF model because there are several well-known problems with both the theory and practical application of the model.⁵ CUB Ex. 1.0 at 26. Even in that limited role, however, the Commission must recognize the deficiencies of the CAPM, require appropriate inputs, and use the results judiciously. Id. The CAPM analysis presented by Ms. Ahern has two problems: an inappropriate adjustment of the beta parameter, and a grossly overstated EMRP. CUB Ex. 1.0 at 37.

⁵ Specific problems in the proposed IAWC analysis will be discussed here, but general problems with the theory and application of the CAPM model can be found in CUB Ex. 1.0 at pages 26, 30, 33-36.

c. **Beta Coefficient**

The beta coefficient (B) represents the degree to which the price of a stock moves with the overall market, or the volatility of an individual stock compared to the volatility of the market. CUB Ex. 1.0 at 28. A beta of 1.0 represents a stock that moves in complete unison with the overall market – that is, the stock has exactly the same risk as the overall market. Id. If the beta is less than 1.0, then the stock is less volatile than the overall market, indicating that returns are more stable and presumably less risky. Id. If the beta is greater than 1.0, then the stock is more volatile than the overall market, which indicates that its price changes more dramatically than prices in the overall market, and the stock is riskier than the market. Id.

The problem is that Ms. Ahern uses raw beta estimates, adjusted for mean reversion, as valid CAPM inputs (the Value Line estimates). Id. Value Line computes raw beta estimates from a regression equation that measures the beta.⁶ Id. Then, Value Line adjusts the beta closer to 1.0 using a mean reversion adjustment⁷, that is, Value Line assumes that betas have a long-term tendency to converge towards 1.00⁸. CUB Ex. 1.0 at 29. When Value Line performs this adjustment, it incorporates those three key assumptions: (1) betas are unstable; (2) betas will eventually move to 1.0; and (3) the risk of the utility companies will eventually move toward the overall risk of other non-utility companies.

A reversion of regulated utility betas toward 1.00 means that utilities (which usually have betas below 1.00) will tend to become more risky over time. Id. That is essentially a presumption that state commissions will be unable or unwilling to maintain stability for a

⁶ Beta is the covariance of a security to the market divided by the variance of the market.

⁷ Adjusted beta = $2/3 \times$ Unadjusted beta + $1/3 \times 1.0$, or unadjusted beta = Adjusted beta $\times 3/2 - 1/2$. CUB Ex. 1.0 at 29.

⁸ http://www.valueline.com/sup_glossb.html

monopoly firm that can modify its earnings through a regulatory process, instead of against the opposition of competitors. *Id.*

However, the risk (beta) of utility companies has not been shown to move towards the risk (beta) of other non-utility companies. *Id.* Similarly, utility betas have not been shown to trend to a beta of 1.0. *Id.* Thus, the unwarranted adjustment improperly increases betas and the overall CAPM cost of equity. *Id.* Even the initial study commonly cited as the basis to support the mean reversion adjustment, which was completed in the 1970's by Wharton Professor Dr. Marshall E. Blume⁹, questions the usefulness of a one-size fits all mean reversion adjustment. CUB Ex. 2.0 at 7. Dr. Blume found that the accuracy of betas was improved by some adjustment; however, he also noted that:

...the use of the historical rate of regression to correct for the future rate will not perfectly adjust the assessments and may even overcorrect by introducing larger errors into the assessments than were present in the unadjusted data¹⁰.

Dr. Blume used a dynamic or changing adjustment factor in his study and concluded that a static adjustment, such as the one used by Value Line and defended by Ms. Ahern, was not conclusively better than a purely unadjusted beta. While the Commission has accepted a static adjustment without question in the past, there is no evidence in this case that a "one-size fits all adjustment" is reasonable or results in appreciably better beta estimates. CUB Ex. 2.0 at 8. As such, Mr. Thomas testified that it is not appropriate to include the adjustments made by Value Line, absent clear empirical evidence that the adjustment improves the accuracy of beta estimates. CUB Ex. 1.0 at 29. Since utility betas are typically below 1.0, the unwarranted adjustment has the effect of improperly increasing betas and the overall CAPM cost of equity. *Id.*

⁹ Marshall E. Blume, On the Assessment of Risk, *The Journal of Finance*, 9 (Mar., 1971)

¹⁰ *Ibid*, at 8-9.

d. EMRP

The EMRP represents the premium, above the risk-free rate, that investors expect when they take on the risk of an investment in the market portfolio, or the universe of potential investment opportunities available to investors. CUB Ex. 1.0 at 32. Ms. Ahern used analysts' forecasts to compute an EMRP of 10.32%. CUB Ex. 1.0 at 33. As discussed above, the use of analysts' growth forecasts in determining investors' growth expectations is an unreliable method, and as a result, Ms. Ahern's EMRP is grossly overstated.

There are two main approaches to deriving the EMRP input for a CAPM analysis: either EMRP estimates derived from the academic studies of market performance are used, or an EMRP estimate is calculated for particular situations or cases. *Id.* Ms. Ahern uses the latter approach.

Questions concerning the appropriate EMRP have been called "the most debated issue in finance"¹¹ and "the premier question relating to the cost of capital, for theorists and practitioners alike."¹² *Id.* Given the uncertainty, the Commission should look to research and analysis performed by unbiased academics over many years instead of the assertions or *ad hoc* calculations of interested participants in economic contests. *Id.* An *ad hoc* calculation for a particular rate case is unlikely to produce a result superior to one drawn from years of research by the financial and academic communities.

The overwhelming conclusion from current research on the EMRP is that the return expected by investors and appropriate for use in the CAPM is far lower than returns calculated from selective samples of historic information. CUB Ex. 1.0 at 34. Both the historic record, financial theory, and prospective estimates based on stock prices and growth expectations, all

¹¹ Tim Koller et al., Valuation: Measuring and Managing the Value of Companies 297 (2005).

¹² Seth Armitage, The Cost of Capital: Intermediate Theory 87 (2005).

indicate that the future equity premium in developed capital markets is likely to be between 3 and 5%.¹³ *Id.* This actual risk premium is far lower than the 8% historic returns calculated from selective historic data would indicate.¹⁴ *Id.*

Instead of relying on theoretical modeling and quibbling over data, there is data available from actual surveys of investors. CUB Ex. 1.0 at 35. For example, Tim Ogier, John Rugman, and Lucinda Spicer discuss the results of some of these surveys in their 2005 publication:

In the US, Merrill Lynch publishes ‘bottom up’ expected returns on the Standard and Poor’s 500, derived by averaging expected return estimates for stocks in the Standard & Poor’s 500...In recent years, the Merrill Lynch expected return estimates have indicated an EMRP in the region of 4% to 5%.¹⁵

Id. They noted that Value Line projected market risk premia were somewhat more volatile than those from the Merrill Lynch example quoted above, ranging in recent years from 2% to 6%.¹⁶ CUB Ex. 1.0 at 36. Finally, they examined the results of an annual survey of pension plan officers regarding expected returns on the Standard and Poor’s 500 for a five-year holding period which indicated an EMRP in a 2%-3% range.¹⁷ *Id.*

All of this research justifies an EMRP in the range of 3.0 to 5.0%, with some research indicating that the actual EMRP is much lower. *Id.* Recognizing that the Commission has typically adopted an EMRP estimate that is calculated for a specific case, Mr. Thomas used the higher end of the EMRP spectrum in his CAPM analysis, 5%. Ms. Ahern’s 10.32% estimate, which is clearly outside the estimates provided by the academic research, is at the high-end of the spectrum. CUB Ex. 1.0 at 38. Calculating an individual EMRP based upon analysts’

¹³ Enrique Arzac, *Valuation for Mergers, Buyouts, and Restructuring*, John Wiley and Sons, 35 (2005).

¹⁴ John M. West, CFA. *Equity Risk Premium*, *Wurts & Associates Topics of Interest* 5 (April 2005).

¹⁵ Ogier *et. al.*, *The Real Cost of Capital A Business Field Guide to Better Financial Decisions* 74 (2004).

¹⁶ *Id.*,

¹⁷ *Id.* at 75 (2004).

forecasts inappropriately reflects the current short-term discontinuity where the Commission’s task is to set a cost of equity capital that is sustainable over the period that rates are in effect.

CUB Ex. 2.0 at 8.

e. CAPM Results

As shown on the table below, using the CAPM model ($k = R_f + B(EMRP)$) with a risk-free rate (R_f) of 4.25%, a range of EMRPs from 5% to 10.32%, and a beta (B) of .49 produces a range of 6.72% to 9.34%. CUB Ex. 1.0 at 38.

| | Literature | Ahern EMRP |
|-------------|-------------------|-------------------|
| Rf | 4.25% | 4.25% |
| EMRP | 5.00% | 10.32% |
| B | 0.49 | 0.49 |
| CAPM | 6.72% | 9.34% |

The CAPM produces results that range from 6.72% to 9.34% (average 8.03%) even when Ms. Ahern’s grossly inflated EMRP estimate is used as an input. Id.

IV. RETURN ON EQUITY

The Commission should adopt a 7.44% cost of equity capital based on the averaged results of Mr. Thomas’ CAPM (8.03%) and DCF (6.85%) analyses.

a. Financial Risk Adjustment

Ms. Ahern proposes a 30 basis point adjustment to reflect different financial risk characteristics between IAWC and the sample companies. CUB Ex. 1.0 at 39. Such an

adjustment is unwarranted since there is no evidence of what IAWCs debt would be rated at were it actually to be rated by Moody's and S&P. Id.

Mr. Thomas testified that as recently as September 24, 2009, allegations that credit ratings are being artificially inflated continue to come to light, and despite months of regulatory scrutiny and some internal changes at the firms, a recently departed Moody's Corp. analyst says inflated ratings are still being issued. CUB Ex. 1.0 at 40. Such information calls into question heavy reliance on credit ratings when determining the cost of capital. Id.

Ms. Ahern does not dispute the notion that credit rating agencies have come under heavy scrutiny for "overly rosy" projections. She notes that much of the criticism in the two articles given as examples by Mr. Thomas referred to the rating of collateralized debt obligations) and not to the long-term debt of utilities (which typically finances utility plant and hence rate base). IAWC 8.00R2 at 20. She then points to measures adopted by the SEC in December 2008 to strengthen oversight of the major credit rating agencies by increasing transparency and accountability at the agency level, noting that such measures were intended to address past concerns. Id. Finally, she concludes that if credit ratings are inflated, then they all are inflated, and it is her opinion that if IAWC had long-term debt which was rated by Moody's or S&P, it would likely be rated at the bottom of the Baa//BBB category or possibly at the top of the Ba//BB category (the latter being below investment grade), with a likely S&P business position of strong and a financial risk profile of aggressive to highly leveraged.

None of these responses address the heavy reliance on credit rating agency projections that form the basis of Mr. Thomas' recommendation for the Commission to reject the adjustment. Both he and Mr. Ahern agree that the credit rating agency projections are inflated.

The difference is that he then recommends the Commission adjust for that inflation in the usual DCF and CAPM analyses, and not through a separate adjustment.

b. Business Risk Adjustment

Ms. Ahern also proposes an adjustment for a perceived “business risk” facing IAWC. IAWC Ex. 8.00 at 39. Her adjustment assumes that IAWC would be traded at a market-to-book ratio similar to that of a group of sample companies. CUB Ex. 1.0 at 41. Such an adjustment inflates the DCF cost of equity estimates above the already inflated results she produces. CUB Ex. 1.0 at 42. There is no evidence for such an adjustment, and Ms. Ahern’s argument is just a repackaged version of the market-to book adjustment that the Commission has denied in the past. Id.

It has traditionally been the Commission’s practice to apply unadjusted market-based DCF results to the book value rate base assets. In the last rate cases for Peoples and North Shore Gas (Docket Nos. 07-0241/07-0242/Cons.), the Commission found that:

In the Commission’s judgment, the book value capital structure reflects the amount of capital a utility actually utilizes to finance the acquisition of assets, including those assets used to provide utility service. In establishing the overall or weighted average cost of capital, the proportion of common equity, based on the book value capital structure, is multiplied by market-required return on common equity. The Commission has used this approach in establishing utility rates for at least twenty-five years. E.g., Ameren Order, Docket Nos. 06-0070/06-0071/06-0072 (consol.) at 141 (“[t]he Commission observes that it has repeatedly rejected arguments in favor of using market-to-book ratios as the basis for establishing cost of common equity”). Market value is not utilized in this calculation because it typically includes appreciated value (as reflected in its stock price) above the Utilities’ actual capital investments.

The Utilities assert, however, that theirs is a “financial leverage adjustment,” not a “market-to-book adjustment.” NS-PGL BOE at 30-31. This elevates form and nomenclature over substance. The

Utilities perform their adjustment by first determining the cost of equity for a utility (represented by the average of the utility sample) with a 100% equity capital structure, using the market value of the equity (the result is 8.35%). From that, they then calculate the ROE for a utility (again represented by the average of the utility sample) based on the equity reflected in a book value capital structure (a 9.53% result). NS-PGL Ex. PRM 1.13, p. 13-14. The Utilities recognize that this process is equivalent to applying an unadjusted equity return to the market value of the utility's shares, resulting in an adjustment identical to the one we rejected in the Ameren Order. City-CUB Cross-Ex. 5. Again, our practice is to approve a return on a utility's actual investments at book value, not on the appreciated value of its common stock, however calculated and denominated.

Further, the Utilities have failed to establish why a mismatch between the financial risk reflected in the book value and market value capital structures is problematic. If the Utilities were correct that regulatory commissions, including this one, have been understating the market-required return on equity for twenty-five years, then the market values of common equity for utilities would not have remained well above the book values during that time. A practice of routinely understating the market-required return on common equity would have surely driven down the market values of common equity to near book value, but that has not happened. **Accordingly, the Commission does not agree that an adjustment to the market required return on common equity is necessary to reflect the difference in financial risk between book value and market value capital structures.** Therefore, we reject the Utilities' financial leverage adjustment to their DCF results and their proposal to impose a similar leveraging adjustment to the betas used in their CAPM analysis. Feb 5, 1008 Order at 95-96 (footnotes omitted)

CUB Ex. 1.0 at 42-43 (emphasis added), citing Final Order at 95-96, *Peoples Gas Light and Coke Co. and North Shore Gas Company proposed general increase in natural gas rates*, ICC Dockets No. 07-0241 and 07-0242, consolidated, February 5, 2008 (PGL-NS Final Order).

Ms. Ahern has presented no new evidence or financial theory that makes the Commission's analysis inapplicable in this case. She has not shown that applying a market-based cost of equity to the Companies' book value rate base has impeded IAWC's ability to raise

capital or to maintain their financial integrity. CUB Ex. 1.0 at 43. Nor has she presented any evidence that should persuade the Commission to depart from its long-standing practice of applying unadjusted market-based cost of equity measures to book value rate base. The Commission is correct to reject attempts to inflate the cost of equity capital to maintain the Utilities' market-to-book ratios above 1.0, and should do so now.

Ms. Ahern responds that she calculated her business risk adjustment differently than the one rejected in the Peoples/North Shore case. This misses the point of the Commission's prior ruling. The Commission was not concerned with how a "financial leverage adjustment," or, as in this case, a "business risk adjustment," is calculated. Instead, the Commission's order rejected any proposed adjustment to "reflect that the difference in financial risk between book value and market value capital structures." PGL-NS Final Order at 96. Ms. Ahern does add that her business risk adjustment is based upon "size and other risk factors unique to IAWC." IAWC 8.00R2 at 23. However, the factors she identifies – geographic location, environmental regulation, and the fundamental fact that water is subject to seasonal fluctuations, allocation questions and potential interruptions – are all factors shared by the sample companies included in her DCF and CAPM analyses. She fails to explain why IAWC is unique in its situation among water utilities, and without any such evidence the Commission should reject any adjustment based on some perceived increase in risk for IAWC relative to other utilities.

c. Weighted Average Cost of Capital

Using the capital structure recommended by Mr. Smith, and incorporating the adjustments to cost of equity estimate recommended by Mr. Thomas, the Company's weighted average cost of capital is 6.67%, as shown on the table below.

| <u>CAPITAL</u> | <u>AMOUNT</u> | <u>WEIGHT</u> | <u>COST</u> | <u>WEIGHTED COST</u> |
|----------------------|---------------|---------------|-------------|----------------------|
| Long-Term Debt | \$373,182 | 47.98% | .53% | 3.13% |
| Short-Term Debt | \$47,119 | 6.06% | .97% | 0.12% |
| <u>Common Equity</u> | \$357,559 | 45.97% | .44% | 3.42% |
| TOTAL | \$777,860 | | | 6.67% |

V. CONCLUSION

For the reasons discussed herein, CUB respectfully requests that the Commission reject IAWC's request for a general rate increase, and adopt the capital structure and cost of equity recommended herein.

Respectfully submitted,

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