BEFORE THE NEW HAMPSHIRE PUBLIC UTILITIES COMMISSION

IN THE MATTER OF	)	
AQUARION WATER COMPANY OF	)	**DW 12-085**
NEW HAMPSHIRE, INC.	)	

SURREBUTTAL TESTIMONY
OF
DAVID C. PARCELL
ON BEHALF OF
TOWN OF HAMPTON, NH
TOWN OF NORTH HAMPTON, NH

APRIL 8, 2013

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME, OCCUPATION, AND BUSINESS ADDRESS.

A. My name is David C. Parcell. I am President and Senior Economist of Technical Associates, Inc. My business address is Suite 580, 9030 Stony Point Parkway, Richmond, Virginia 23235.

Q. ARE YOU THE SAME DAVID C. PARCELL WHO FILED DIRECT TESTIMONY IN THIS PROCEEDING ON BEHALF OF THE TOWN OF HAMPTON AND TOWN OF NORTH HAMPTON?

A. Yes, I am.

Q. WHAT IS THE PURPOSE OF YOUR PRESENT TESTIMONY?

A. My present testimony is prepared to respond to the Rebuttal Testimony of Aquarion Water Co. of New Hampshire ("AWC-NH") witness Pauline M. Ahern.

Q. HOW HAVE YOU ORGANIZED YOUR RESPONSES TO MS. AHERN'S REBUTTAL TESTIMONY CONCERNING THE COMMON EQUITY COST RATE?

A. Ms. Ahern's Rebuttal Testimony addresses the concepts of proxy group composition, water utility risks, and various cost of equity models – DCF, CAPM, and CE. Accordingly, my Surrebuttal Testimony addresses each of these concepts in turn.

Q. HAVE YOU PREPARED AN EXHIBIT IN SUPPORT OF YOUR TESTIMONY?

A. Yes, I have prepared one exhibit, identified as Exhibit__(DCP-2). This is comprised of 18 schedules.

PROXY GROUP SELECTION

Q. ON PAGE 3 OF HER REBUTTAL TESTIMONY, MS. AHERN CRITICIZES YOUR USE OF A NATURAL GAS PROXY GROUP IN YOUR COST OF CAPITAL ANALYSES. DO YOU HAVE ANY RESPONSES TO THIS CRITICISM?

A. Yes, I do. As I indicated in my Direct Testimony (page 16, lines 6-9) I used the natural gas proxy group as a "secondary proxy group" to the water proxy group I used in developing my cost of equity models. Ms. Ahern takes exception to the use of a natural gas utility proxy group and describes it as "inappropriate."

Q. WHY HAVE YOU DEVELOPED THE NATURAL PROXY GAS GROUP AS A SECONDARY PROXY GROUP TO THE WATER UTILITY GROUP USED IN YOUR ANALYSES?

A. I also developed the secondary natural gas proxy group in order to avoid any potential criticism that the water proxy group may have limitations. It is sometimes argued that there is a relatively small sample of publicly-traded water utilities. In addition, some of the available water utilities have a limited amount of data from public sources. As a result, some utility analyses consider alternative sources of data, in addition to water utility data, in conducting cost of capital analyses.[1]

Q. YOU NOTED THAT MS. AHERN DESCRIBED THE USE OF NATURAL GAS UTILITIES AS INAPPROPRIATE. ARE YOU AWARE OF ANY INSTANCES IN WHICH MS. AHERN HAS ALSO USED NATURAL GAS UTILITIES AS A PROXY GROUP IN WATER UTILITY CASES?

A. Yes. Ms. Ahern responded to Request No. Hampton 4-4, which asked her if she has previously used natural gas utilities as proxy companies for water utilities. Her response, attached as Schedule 1, indicated thirty-seven testimonies in which she had used natural gas utilities as a proxy for water utilities.

[1] It is noteworthy that in this proceeding, unlike the vast majority of utility rate proceedings, AWC-NH did not present a cost of capital witness in support of its requested return on equity ("ROE").

For example, in 2009 testimony involving United Water Delaware, Inc. (before the Delaware Public Service Commission in Docket No. 09-60), Ms. Ahern used a natural gas utility proxy group, in addition to a water utility proxy group, in her cost of equity analyses. She justified use of the natural gas proxy group as follows (page 18, lines 19-23 of her United Water Delaware testimony):

> Because of the small number of publicly traded water companies available for use as proxies for UWDE as well as the limited availability of comprehensive marketability of those companies, I have also utilized a proxy group of gas distribution companies. Like water companies, these gas distribution companies deliver a commodity, i.e., natural gas to customers through a similar distribution system.

I note that Ms. Ahern does not appear to have used a natural gas proxy group in her most recent testimonies involving water utilities. However, her use of the term “inappropriate” is not a time sensitive concept such that one can consider it to be “appropriate” to use natural gas utilities at one point in time and “inappropriate” in a slightly later point in time.

Q. IN HER RESPONSE TO REQUEST NO. HAMPTON 4-4, MS. AHERN MAINTAINS THAT SHE BELIEVES THAT WATER UTILITIES HAVE GREATER INVESTMENT RISK RELATIVE TO OTHER UTILITIES. DO YOU HAVE ANY RESPONSE TO HER POSITION?

A. I disagree with her assertion that the investment risk of water utilities is greater than that of other types of utilities. I note that it also appears that the majority of regulatory commissions in the U.S. share my view, as the average authorized ROEs tend to be lower for water utilities. As an example of this, the average “Allowed ROE” for the four categories of utilities covered in AUS Utility Reports (published by Ms. Ahern’s firm - latest edition attached as Schedule 2) are as follows:

Type of Utility	Avg. Auth. ROE
Electric Companies	10.53%
Combination Electric & Gas Cos	10.41%
Natural Gas Distribution & Integrated	10.55%
Water Companies	9.98%

I also note that the authorized ROEs cited above, though being the "most recent" returns, are not necessarily reflective of authorized ROEs at the current time. For example, the average authorized ROE in 2012 for natural gas utilities, as reported by the Regulatory Research Association, are 9.75 percent, a decline from 9.92 percent in 2011 (see Schedule 3). These also indicate a downward trend over recent periods.

Q. WHAT IS THE IMPACT OF INCLUDING NATURAL GAS UTILITIES AS A PROXY GROUP IN YOUR ANALYSES?

A. The inclusion of the secondary natural gas proxy group has little effect on my cost of equity recommendations in this proceeding. The following summary demonstrates that the inclusion of natural gas utilities results in similar cost of equity results to those obtained by reference to the water proxy group:

Model	Water Group	Natural Gas Group
DCF	8.3% to 9.6%	9.2% to 9.3%
CAPM	6.0% to 6.1%	6.0%
CE		
Historic ROE	9.5% to 11.3%	10.8% to 11.4%
Historic M/B	174% to 215%	170% to 173%
Projected ROE	8.5% to 10.0%	9.3% to 10.6%

DISCOUNTED CASH FLOW MODEL (DCF)

Q. PLEASE PROCEED WITH MS. AHERN'S COMMENTS ON YOUR IMPLEMENTATION OF THE DCF MODEL. MS. AHERN MAINTAINS IN HER REBUTTAL TESTIMONY ON PAGES 14-16, THAT THE DCF MODEL CANNOT BE USED AS AN ESTIMATE OF THE COST OF EQUITY FOR A UTILITY WHEN THE MARKET PRICE OF UTILITY STOCKS EXCEEDS THE BOOK VALUE. DO YOU AGREE WITH THIS POSITION?

A. No, I do not. Knowledgeable and/or informed investors are well aware of the fact that most utilities have their rates set based on the book value of their assets (i.e., rate base and capital structure). This knowledge is reflected in the prices that investors are willing to pay for stocks and thus is reflected in DCF cost rates. To make a modification of the DCF cost rates, as Ms. Ahern proposes, amounts to an attempt to "reprice" stock values in order to develop a DCF cost rate more in line with what she thinks the results should be. This is clearly a violation of the principle of "efficient markets", which Ms. Ahern cites extensively in her Rebuttal Testimony. If one believes that markets are efficient, there is no reason to modify either stock prices or market models that are based on stock prices.

Q. ON PAGES 14-15 OF HER REBUTTAL TESTIMONY, MS. AHERN STATES HER VIEW THAT WHEN MARKET PRICES EXCEED THE BOOK VALUE, THE DCF RESULTS UNDERSTATE THE COST OF EQUITY. SHE ALSO POSTULATES THAT WHEN THE REVERSE OCCURS, THE DCF RESULTS WOULD OVERSTATE THE COST OF CAPITAL. DO YOU HAVE ANY COMMENTS ON THIS?

A. Yes, I do. I was testifying in utility rate cases in the 1970s and early 1980s, a period during which utility stock prices were frequently well below book value. Based on my personal recollections, I cannot remember a single instance in which a utility-sponsored cost of capital witness (including members of her firm) advocated that the DCF model overstated the cost of equity. I also never have taken this position.

Q. ON PAGE 16, LINES 18-21 OF HER REBUTTAL TESTIMONY, MS. AHERN ACCUSES YOU OF "IGNORING VALUE LINES'S PROJECTED EPS GROWTH RATES." IS HER ASSERTION CORRECT?

A. No, she is not correct. Schedule 6, pages 3 and 4 of my Direct Testimony indicates that I have considered and incorporated Value Line's projections of EPS in my DCF analyses.

Q. ON PAGES 16-20 OF HER REBUTTAL TESTIMONY, MS AHERN MAINTAINS THAT EXCLUSIVE RELIANCE ON ANALYSTS' FORECASTS OF EARNINGS PER SHARE IS APPROPRIATE IN A DCF CONTEXT. DO YOU HAVE ANY COMMENTS ON THIS?

A. Yes, I do. I first note that I do not criticize her for using analysts' forecasts of EPS as on one component of growth in her interpretation of the DCF model. In fact, I use EPS forecasts in my DCF analyses as well (as noted above). What I criticize her for is the exclusive reliance on EPS forecasts. As I indicate in my Direct Testimony, investors have a multitude of information available to use in making investment decisions. It is overly simplistic to believe that all investors rely exclusively on EPS forecasts, yet that is what Ms. Ahern is implicitly assuming.

Q. DOES MS. AHERN BELIEVE THAT ALL INVESTORS RELY EXCLUSIVELY ON ANALYSTS' FORECASTS OF EPS IN MAKING INVESTMENT DECISIONS?

A. Apparently, she does not. In her response to Request No. Hampton 4-11 (attached as Schedule 4), she indicated that she "has not stated that she 'believes' that all investors rely exclusively on analysts' forecasts of earnings per share (EPS) in making investment decisions." Nevertheless, her proposal to rely exclusively on EPS projections in a DCF analysis, to the exclusion of all other types of information provided and available to investors, does implicitly assume that investors rely exclusively on EPS projections in making investment decisions.

Q. ON PAGE 17, LINES 4-8, OF HER REBUTTAL TESTIMONY, MS. AHERN STATES "IT IS NOT NECESSARY TO EVALUATE ANY GROWTH PROXY EXCEPT SECURITY ANALYSTS' FORECASTS OF EPS GROWTH BECAUSE SECURITY ANALYSTS' FORECASTS TAKE INTO ACCOUNT HISTORICAL INFORMATION AS WELL AS CURRENT INFORMATION LIKELY TO IMPACT THE FUTURE, WHICH IS CRITICAL SINCE BOTH COST OF CAPITAL AND RATEMAKING ARE PROSPECTIVE." IS SHE CORRECT IN HER ASSERTION?

A. No, she is not correct. It is neither appropriate not realistic to assume that all investors rely exclusively on security analysts' forecasts of EPS in making investment decisions. Yet, this is what Ms. Ahern is advocating in her rebuttal testimony.

Q. WHY IS IT IMPROPER TO RELY EXCLUSIVELY ON EPS FORECASTS IN A DCF ANALYSIS?

A. There are several reasons why it is not appropriate to rely exclusively on analysts' forecasts in the DCF context. First, it is not realistic to believe that all investors rely exclusively on a single factor, such as analysts' forecasts of EPS, in making their investment decisions. Investors have an abundance of available information to assist them in evaluating stocks; EPS forecasts are only one of many such statistics.

Second, Value Line - one of Ms. Ahern's sources of EPS projections – publishes a large number of both historic and forecasted data, as well as ratios, for publicly-traded companies. Presumably, both types of information are published for the consideration of its subscribers/investors. Yet, Ms. Ahern considers only *one* factor -- the *forecast* version of EPS in her analyses.

Third, the vast majority of information available to investors, by both individual companies in the form of annual reports and offering circulars, and by investment publications such as Value Line, is historic data. One such source of historic data is published by Ms. Ahern's firm and she, in fact, is the editor – AUS Utility Reports. It is neither realistic nor logical to maintain that investors only consider projected (estimated) data to the exclusion of historic (actual) data.

Fourth, there have been a number of academic studies that indicate that analysts' forecasts have been overly-optimistic in the past. See, for example, a 1998 article in *Financial Analysts Journal*, Vol. 54, No. 6, Nov./Dec. 1998, 35-42, titled "Why So Much Error In Analysts' Earnings Forecasts?" by Vijay Kumer Chopra. In this article, the author concludes "Analysts' forecasts of EPS and growth in EPS tend to be overly optimistic." He found that analysts' forecasts of EPS over the past 13 years have been more than twice the actual growth rate. Investors are aware of the propensity of analysts to over-estimate EPS forecasts. In addition, the presumption that investors rely *only* on a single projection, as was made by Ms. Ahern, implies that investors are unsophisticated and unable to make their own decisions. This also is not realistic.

Fifth, the experience over the past several years should be a clear signal to investors that analysts cannot accurately predict EPS levels. Few, if any, analysts predicted the decline in security prices in the tech market crash of 2000-2002, as well as the financial crisis of 2008 and 2009.[2] Thus, relying only on forecasted EPS levels, while ignoring historic EPS levels – and other factors, cannot and will not produce accurate results.

In summary, investors are now very much aware of recent inabilities of security analysts to accurately predict EPS growth. These problems clearly call into question the reliance on analysts' forecasts as the *only* source of growth in a DCF context. As a result, the landscape has changed in recent years and investors have ample reasons to doubt the reliability of such forecasts at the present time. In light of the above, it is problematic to rely exclusively on such forecasts in determining the cost of equity for AWC-NH.

Q. ARE YOU AWARE OF ANY RECENT ANALYSES AND COMMENTS ON THE ACCURACY OF ANALYSTS' FORECASTS?

A. Yes, I am. A 2010 study by McKinsey & Company, titled, "Equity Analysts: Still Too Bullish" concludes that "after almost a decade of stricter regulation, analysts' earnings forecasts continue to be excessively optimistic." I have attached a copy of this study as Schedule 5. The significance of this study, as well as the points I raised previously, is that investors should be hesitant to rely exclusively on analysts' forecasts in making investment decisions.

Q. MS. AHERN CITES TWO STUDIES, ON PAGES 17-18 OF HER REBUTTAL TESTIMONY THAT SHE MAINTAINS THAT ANALYSTS' FORECASTS ARE "SUPERIOR TO HISTORICAL GROWTH EXTRAPOLATIONS." DOES THIS JUSTIFY EXCLUSIVE RELIANCE ON ANALYSTS' EPS FORECASTS IN A DCF CONTEXT?

A. No, it does not. Ms. Ahern has asked herself the wrong question. Instead of asking "Is exclusive use of analysts' forecasts superior to exclusive use of historical extrapolation of growth" she should be asking "Is it more appropriate to use alternative indicators of growth rather than one exclusive indicator of growth" in a DCF context.

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2 As demonstration of this, see "Security Analysts and their Recommendations, (http://thismatter.com/money/stocks/valuation/security-analysts.htm).

Q. HAVE ANY EMPIRICAL STUDIES ASKED THIS QUESTION?

A. Yes. There have been several studies conducted that indicate that EPS forecasts are not exclusive factors considered by investors. These studies contradict Ms. Ahern's claims that EPS forecasts are the only relevant growth estimates. One such example is a 1987 study by Conroy and Harris (in Management Science, Vol. 33, No. 6, June 1987, 725-738) that directly compared IBES (Institutional Brokers Estimate System, now Thompson Financial First Call) projections vs. historic growth in EPS as indicators of stock price performance. They found that analysts' forecasts were better than historic EPS over the short-term, but the advantage declined over time. They also found that a combination of forecasts and historic EPS is better than just forecasts of EPS.

A second study, also in 1987, by Newbolt, Zumwalk, and Kannan (in International Journal of Forecasting, Vol. 3, 1987, 229-238) compared Value Line EPS projections with historic growth of EPS, DPS and retention growth as indicators of stock price performance. They found that analysts' forecasts of EPS are better than only historical data, but that a combination of forecasts and historic data is best.

A third study was published in 1989 by Timme and Eisemann (in Financial Management, winter 1989, 23-35). This study compared IBES and Value Line projections with historic growth of EPS. They concluded that analysts' forecasts of EPS are superior to exclusive use of historic data, but do not contain all relevant information utilized by investors. They further concluded that a combination of forecast and historic data is better than exclusive use of analysts' forecasts.

In summary these studies, which focus on the more appropriate question, found that investors do not rely exclusively on analysts' forecasts of EPS.

Q. ON PAGES 18-19 OF HER REBUTTAL TESTIMONY, MS. AHERN CITES AN "EMPIRICAL STUDY" THAT SHE CLAIMS INDICATES THAT INVESTORS SHOULD RELY EXCLUSIVELY ON ANALYSTS' FORECASTS. HAS SHE CORRECTLY INTERPRETED THE FINDINGS OF THIS STUDY?

A. I do not believe Ms. Ahern has properly reported the results of this study, which she has attached to her Rebuttal Testimony as Attachment PMA-2. For example, the Abstract of the article states "However, evidence from the response of stock prices and trading volumes to upgrades and downgrades suggests that the market recognized analysts' conflicts and *properly discounts analysts' opinions*" [Emphasis added]. The finding that investors "discount the opinion" of analysts is indicative that investors do not rely exclusively on analysts' forecasts and opinions. This is a contrary result to that advocated by Ms. Ahern.

Q. WAS MS. AHERN ASKED IF SHE WAS AWARE OF ANY EMPIRICAL STUDIES THAT CONCLUDE THAT ALL INVESTORS RELY EXCLUSIVELY ON EPS PROJECTIONS IN MAKING INVESTMENT DECISIONS?

A. Yes, she was. In her response to Request No. Hampton 4-12 (attached as Schedule 6), she acknowledged that she "is not aware of any empirical studies which show that investors rely exclusively on any particular measure of growth…" Yet, her DCF proposal implicitly assumes that all investors rely exclusively on EPS projections.

Q. WAS MS. AHERN ASKED IF SHE WAS AWARE OF ANY EMPIRICAL STUDIES THAT CONCLUDE THAT INVESTORS RELY ON FACTORS OTHER THAN ANALYSTS' FORECASTS OF EPS?

A. Yes, she was asked this question, as Request No. Hampton 4-13. Her response (attached as Schedule 7), does not identify any such studies or directly acknowledge the existence of any such studies. However, in a prior answer, I identified three such studies that indicate that investors do rely on data other than EPS projections.

Q. HAS THE UNITED STATES SECURITIES AND EXCHANGE COMMISSION ISSUED ANY REPORTS THAT ADDRESS THE EXCLUSIVE RELIANCE OF ANALYSTS' RECOMMENDATIONS?

A. Yes. In a 2010 "Investor Alert: Analyzing Analyst Recommendations" the Securities and Exchange Commission ("SEC") made the following statement:

> As a general matter, investors should not rely solely on an analyst' recommendation when deciding whether to buy, hold, or sell a stock. Instead, they should also do their own research – such as reading the prospectus for new companies or for public companies, the quarterly and annual reports filed with the SEC – to confirm whether a particular investment is appropriate for them in light of their individual financial circumstances.

This SEC "Investor Alert" (attached as Schedule 8) also cites the potential conflicts of interests that analysts face.

This "Investor Alert" thus also calls into question the exclusive reliance on analysts' forecasts, as proposed by Ms. Ahern.

Q. MS. AHERN CITES VALUE LINE REPORTS IN HER REBUTTAL TESTIMONY, DOES SHE NOT?

A. Yes, she does.

Q. DOES VALUE LINE JUST REPORT FORECASTS OR DOES VALUE LINE ALSO SHOW HISTORIC DATA?

A. Value Line shows both historic and projected data. In fact, Value Line shows a great deal more historic data than projected data. Further, Value Line puts its projected data in bold print to distinguish projections from actual historic data. It is clearly overly-simplistic to believe that Value Line subscribers would ignore all the historic data contained in the reports and rely exclusively on the EPS projections.

Q. ON PAGE 20, LINES 13-24 OF HER REBUTTAL TESTIMONY, MS. AHERN ATTEMPTS TO RECALCULATE YOUR DCF ANALYSES TO ONLY INCLUDE FIRST CALL AND VALUE LINE ESTIMATES OF EPS GROWTH. IS THIS A PROPER RESTATEMENT OF YOUR DCF ANALYSES?

A. No, it is not a proper use of my DCF analyses. What Ms. Ahern has done is to manipulate my DCF results to only include two sources of analysts' forecasts of EPS. As I have demonstrated above, on pages 5-11, it is improper to only include EPS forecasts as the growth rate in a DCF analysis.

<u>CAPITAL ASSET PRICING MODEL (CAPM)</u>

Q. WHAT IS THE FIRST POINT MS. AHERN ADDRESSES IN HER REBUTTAL TESTIMONY ON THE CAPM ISSUE?

A. Ms. Ahern's first point is to express her disagreement with my position that the CAPM specifically recognizes the risk of a particular company or industry, whereas the simple risk premium does not (per pages 21-22 of her Rebuttal Testimony). Ms. Ahern states her opinion that I am "incorrect" in my position. I disagree with her on this point.

Ms. Ahern's position apparently focuses only on the use of public utility bond yields in her interpretation of the risk premium analysis which she believes properly recognizes the risk of the subject company. This is misleading in terms of its ability to measure risk comparability. My CAPM analysis uses a specific measure of risk (i.e., beta) that reflects the relative stock price variability of specific stocks, or groups of similar-risk stocks. As such, the beta component in a CAPM analysis does specifically recognize the risk of the subject company, unlike the risk premium that essentially assigns the same cost of equity for all utilities with the same bond rating.

Q. MS. AHERN STATES HER BELIEF, ON PAGE 22 OF HER REBUTTAL TESTIMONY, THAT YOUR USE OF 20-YEAR U.S. TREASURY BONDS IGNORES THE FACT THAT BOTH THE COST OF CAPITAL AND RATEMAKING ARE PROSPECTIVE." DO YOU HAVE ANY COMMENTS ON HER POSITION?

A. Yes, I do. Given that Ms. Ahern's risk premium model relies on historic risk premiums dating back to 1926, I find her statement to be inconsistent with her own analyses. Nevertheless, my use of 20 year U.S. Treasury bonds uses the most recent three-month average yields, which is more properly described as "current yields," rather than her description as "historic yields."

I also note that Ms. Ahern again makes reference to the efficient market hypothesis in this section of her testimony. As I indicated previously, her DCF analyses implicitly assumes that markets are not efficient that that stock prices (i.e., DCF cost rates) do not reflect the cost of capital. I respectfully submit that she cannot have it both ways.

Q. ON PAGES 22 AND 23 OF HER REBUTTAL TESTIMONY, MS. AHERN MAINTAINS THAT YOUR CAPM ANALYSIS SHOULD HAVE USED FORECASTED YIELDS ON U.S. TREASURY BONDS RATHER THAN THE CURRENT YIELDS YOU USED. WHAT IS YOUR RESPONSE TO HER ASSERTION?

A. I disagree with Ms. Ahern. It is proper to use the current yield as the risk-free rate in a CAPM context. This is the case since the current yield is known and measurable and reflects investors' collective assessment of all capital market conditions. Prospective interest rates, in contrast, are not measurable and not achievable. For example, if the current yield on 20-year U.S. Treasury Bonds is 2.8 percent, this reflects the rate that investors can actually receive on their investment. Investors cannot receive a prospective yield on their investments since such a yield is not actual but rather speculative.

Use of the current yield in a DCF context is similar to using the current risk-free rate in a CAPM context. Analysts do not use prospective stock prices as the basis for the dividend yield in a DCF analysis, as use of prospective stock prices is speculative. Use of current stock prices is appropriate, as this is consistent with the efficient market hypothesis that Ms. Ahern cites in her Rebuttal Testimony. Likewise, current levels of interest rates reflect all current information (i.e., the efficient market hypothesis) and should be used as the risk-free rate in the CAPM.

Q. MS. AHERN STATES, ON PAGES 24-25 OF HER REBUTTAL TESTIMONY, THAT IT IS IMPROPER TO CONSIDER GEOMETRIC MEAN RETURNS IN THE DETERMINATION OF A RISK PREMIUM AND THAT ONLY ARITHMETIC RETURNS ARE APPROPRIATE. DO YOU AGREE WITH THIS POSITION?

A. No, I do not. What is important is not what Ms. Ahern and I believe, but what investors rely upon in making investment decisions. It is apparent that investors have access to both types of returns when they make investment decisions.

In fact, it is noteworthy that mutual fund investors regularly receive reports on their own funds, as well as prospective funds they are considering investing in, which show only geometric returns. Based on this, I find it difficult to accept Ms. Ahern's position that only arithmetic returns are appropriate.

Q. DOES MS. AHERN USE VALUE LINE INFORMATION IN HER COST OF CAPITAL ANALYSES?

A. Yes, she does. She has in fact cited Value Line reports on various water utilities on her Attachments PMA-4 and PMA-7.

Q. DO THE VALUE LINE REPORTS SHOW HISTORIC AND PROSPECTIVE GROWTH RATES FOR THE WATER UTILITIES?

A. Yes, they do.

Q. DO THESE VALUE LINE REPORTS SHOW HISTORIC AND PROSPECTIVE RETURNS ON AN ARITHMETIC BASIS?

A. No, they do not.

Q. DO THE VALUE LINE REPORTS SHOW HISTORIC AND PROSPECTIVE RETURNS ON A GEOMETRIC, OR COMPOUND GROWTH RATE BASIS?

A. Yes, they do. See Schedule 9, which describes Value Line's method of calculating growth rates. As a result, any investor reviewing Value Line, as Ms. Ahern does, would be using geometric growth rates.

Q. IS MS. AHERN AWARE THAT SECURITY ANALYSTS USE GEOMETRIC (COMPOUND) GROWTH RATES IN THEIR HISTORIC AND ESTIMATED GROWTH RATES?

A. Yes, she is. As she indicated in her response to Request No. Hampton 4-15 (attached as Schedule 10), she acknowledges that she "is aware that security analysts' five-year growth rate forecasts in earnings per share (EPS) are generally compound growth rates." Yet, in her criticism of my CAPM analyses, she maintains that compound (geometric) growth rates are not relevant to investors. She is thus inconsistent in her positions.

Q. IS IT YOUR POSITION THAT ONLY GEOMETRIC GROWTH RATES SHOULD BE USED?

A. No. I believe that both arithmetic and geometric growth rates should be used as I have done in my Direct Testimony on page 21 and Exhibit___(DCP-1) Schedule 8. This is the case because investors have access to both and presumably use both. This is also consistent with the efficient market hypothesis, which Ms. Ahern cites.

Q. ON PAGES 29-32 OF HER REBUTTAL TESTIMONY, MS. AHERN MAINTAINS YOU SHOULD HAVE INCORPORATED AN EMPIRICAL CAPM IN YOUR ANALYSES. DO YOU AGREE?

A. No, I do not agree. Ms. Ahern advocates what she describes as an "empirical" CAPM analysis. This form of the CAPM assumes that beta for an industry understates the industry's volatility and thus, risk and it is necessary to substitute the overall market's beta (i.e., 1.0) for one-fourth of the industry's actual beta. Ms. Ahern assumes that the appropriate beta in a CAPM analysis is a combination of the actual industry beta with a 75 percent weight and a beta of 1 with a 25 percent weight.

The use of an empirical CAPM overstates the cost of equity for companies with betas below that of the market. What the empirical CAPM actually does is inflate the CAPM cost for the selected company or industry on one-fourth of its equity and assumes that one-fourth of the company has the risk of the overall market. This is not appropriate for AWC-NH or for other utilities.

Q. DO YOU AGREE WITH MS. AHERN'S RECALCULATION OF YOUR CAPM ANALYSES, ON PAGES 32-33 AND ATTACHMENT PMA-7 OF HER REBUTTAL TESTIMONY, IN WHICH SHE HAS RE-DONE YOUR CAPM ANALYSES?

A. No, I do not. For the same reasons I have previously indicated on pages 11-15 of this Surrebuttal Testimony, her proposed manipulations of my CAPM analyses are not appropriate.

Q. MS. AHERN CLAIMS, ON PAGE 33, LINES 12-21 OF HER REBUTTAL TESTIMONY, THAT RISK PREMIUMS HAVE INCREASED FROM 2009 TO THE PRESENT. WHAT IS YOUR RESPONSE TO THIS CLAIM?

A. Ms. Ahern's claim selectively uses the beginning point of her comparison as the period ending 2009 (which she uses because this was the time period of AWC-NH's last rate case). However, this was in the midst of the financial crisis cited on pages 6-10 of my Direct Testimony and is not an appropriate beginning point for such an historical comparison of risk premiums.

The table below indicates that risk premiums, tabulated using Morningstar (Ibbotson) data, have declined since the period prior to the Great Recession:

	Geometric Returns			Arithmetic Returns		
Period Ending	Stocks	Gov't Bonds	Risk Premium	Stocks	Gov't Bonds	Risk Premium
2006	10.4	5.4	5.0	12.3	5.8	6.5
2007	10.4	5.5	4.9	12.3	5.8	6.5
2008	9.6	5.7	3.9	11.7	6.1	5.6
2009	9.8	5.4	4.4	11.8	5.8	6.0
2010	9.9	5.5	4.4	11.9	5.9	6.0
2011	9.8	5.7	4.1	11.8	6.1	5.7
2012	9.8	5.7	4.1	11.8	6.1	5.7

This indicates that risk premiums have declined from those that prevailed in prior years, both those periods prior to the Great Recession and those periods since 2009.

COMPARABLE EARNINGS (CE) METHOD

Q. ON PAGE 37 OF HER REBUTTAL TESTIMONY, MS. AHERN INDICATES HER BELIEF THAT YOUR ASSOCIATION OF MARKET-TO-BOOK RATIOS AND RETURNS ON EQUITY ARE "NOT SUPPORTED BY EITHER THE ACADEMIC LITERATURE NOR BY A HISTORICAL ANALYSIS OF THE EXPERIENCE OF UNREGULATED COMPANIES." WHAT IS YOUR RESPONSE TO THIS?

A. I disagree totally with Ms. Ahern on this point. Clearly, public utilities have their rates regulated (i.e., set) based upon their book value of rate base and capital structure. In fact the cost of capital is reflected in the fair return on book value of common equity. Investors are aware of this relationship (i.e., efficient market hypothesis, to again quote Ms. Ahern). Any reference to the experience of unregulated companies, as is evident in Ms. Ahern's rebuttal testimony, simply misses the point of public utility regulation.

Q. ON PAGES 38-39 OF HER REBUTTAL TESTIMONY, MS. AHERN STATES THAT SHE HAS "PERFORMED AN ANALYSIS TO DETERMINE THE EXISTENCE OF A DIRECT RELATIONSHIP BETWEEN THE MARKET-TO-BOOK RATIOS OF UNREGULATED COMPANIES AND THEIR EARNED RATES OF RETURN ON BOOK COMMON EQUITY." IS HER STUDY RELEVANT FOR PUBLIC UTILITIES?

A. No, it is not. Ms. Ahern's study applies to the S&P 500, which is predominately made up of unregulated firms. Many unregulated firms, such as energy producing companies and technology-related companies, have book values that do not reflect the actual value of their underlying assets. As a result, the prices they charge are not related to the book value of their assets.

Utilities, in contrast, have their rates established based upon the book values of their assets (i.e., rate base) and liabilities/common equity (i.e., capital structure). As a result, book value is very relevant for utilities.

Q. MS. AHERN STATES, ON PAGES 39-40 OF HER REBUTTAL TESTIMONY, THAT ANY PROXY GROUP SELECTED FOR A CE ANALYSIS SHOULD BE "BROAD BASED" AND NOT INCLUDE OTHER UTILITIES. DO YOU AGREE?

A. No, I do not. Ms. Ahern maintains that a proxy group selected for use in a CE analysis "should exclude utilities to avoid circularity since the achieved returns on book common equity of utilities, being a function of the regulatory process, are substantially influenced by regulatory awards." In reality, this is the reason that utility returns should be considered in a CE analysis.

I do not regard the use of utility returns as being circular. In contrast, use of utility returns is necessary and appropriate in order to conform to the "relative risk" dictates of the Bluefield and Hope decisions cited in my Direct Testimony. Contrary to Ms. Ahern's position, it is appropriate to consider the impact of regulatory awards since these reflect the same types of analyses (i.e., DCF, CAPM, and CE) that should be utilized in the current proceeding.

MS. AHERN'S "CORRECTED CONCLUSION OF MR. PARCELL'S COST OF COMMON EQUITY

Q. ON PAGES 38-39 OF HER REBUTTAL TESTIMONY, MS. AHERN PRESENTS WHAT SHE DESCRIBES AS "CORRECTIONS" TO YOUR DCF AND CAPM RESULTS. DO YOU AGREE WITH THESE "CORRECTIONS?"

A. No, I do not. In fact, her analyses are not "corrections" at all, but rather reflect her criticisms of my Direct Testimony and the substitution of her model inputs for my inputs. As I have described above, her criticisms and "corrections" are without merit and do not reflect proper implementations of the DCF, CAPM and CE analyses.

Q. BASED UPON YOUR REVIEW OF MS. AHERN'S REBUTTAL TESTIMONY, DO YOU STILL RECOMMEND A ROE FOR AWC-NH OF 8.3 PERCENT?

A. Yes, I do. There is nothing in Ms. Ahern's Rebuttal Testimony that causes me to change my analyses, data sources or recommendations.

<u>BUSINESS RISKS ADJUSTMENT PROPOSED BY MS. AHERN</u>

Q. ON PAGE 49, LINES 9-31 OF HER REBUTTAL TESTIMONY, MS. AHERN STATES HER BELIEF THAT THE COST OF EQUITY FOR AWC-NH IS WITHIN A RANGE OF 10.95 PERCENT TO 11.63 PERCENT, WITH A MID-POINT OF 11.29 PERCENT. SHE CONCLUDES FROM THIS THAT THE COMPANY'S REQUESTED 10.25 PERCENT COST OF EQUITY IS "REASONABLE AND CONSERVATIVE." DO YOU HAVE ANY RESPONSE TO THIS ASSERTION?

A. Yes, I do. Ms. Ahern has performed no independent studies of the ROE for AWC-NH. As she indicated in her response to Request No. Hampton 4-2 (attached as Schedule 11), her conclusions are "based on her review of Mr. Parcell's analysis and the corrections that should be made to that analysis…."

I have demonstrated in my Surrebuttal Testimony that Ms. Ahern's proposed corrections to my analyses are not correct or proper.

Q. HOW DOES MS. AHERN'S STATEMENT -- THAT AWC-NH'S PROPOSED 10.25 PERCENT ROE IS CONSERVATIVE – RELATE TO THE CURRENTLY AUTHORIZED ROE FOR THE COMPANY?

A. The current authorized ROE for AWC-NH is 9.75 percent, which was established in a settlement in its last rate proceeding (Docket No. 08-098) in 2009. There are only two potential justifications for increasing the ROE from the 9.75 percent level agreed to in the last proceeding. First, an increase in capital costs could be used for justifying a higher ROE at this time. Second, an increase in the risk of AWC-NH could be used for justifying a higher ROE.

Q. HAVE CAPITAL COSTS INCREASED SINCE 2009?

A. No. In fact, capital costs have declined since 2009. Schedule 2 of my Direct Testimony indicates that the yield on triple-B utility bonds was 7.25 percent in 2008 (i.e., time period just prior to previous proceeding) and 7.06 percent in 2009. The current yield on triple-B utility bonds is about 4.75 percent. In other words, the cost of debt for triple-B rated utilities has declined some 225 basis points to 250 basis points since AWC-NH's 9.75 percent ROE was established.

Q. IS THERE ANY INDICATION THAT THE RISKS OF AWC-NH HAS INCREASED SINCE 2009?

A. No. In fact, Ms. Ahern was asked specific questions about any studies she has made comparing AWC-NH's risks. In her response to Request No. Hampton 4-5 (attached as Schedule 12) she indicated that she "had not performed any analyses of the level of Aquarion Water Company of New Hampshire's business risk at the current time relative to the level of the business risk at the time of the Company's last proceeding…" In addition, Ms. Ahern acknowledged, in the response to Request No. Hampton 4-17 (attached as Schedule 13) that she has not compared the financial risk of AWC-NH at the time of the last proceeding and now.

Q. HAVE THE RISKS OF THE WATER PROXY GROUP CHANGED SINCE 2009?

A. Yes, they have. I have prepared Schedule 14 to show a comparison of the risk indicators at the current time (as shown on Exhibit___(DCP-1) Schedule 11 of my Direct Testimony) and in 2009. This indicates that, of the four sets of risk indicators, three show declines in risk indicators from 2009 to the present time.

Q. MS. AHERN MAINTAINS, ON PAGES 44-50 OF HER REBUTTAL TESTIMONY, THAT AWC-NH IS A SMALL COMPANY AND ITS OWN SIZE IMPLIES IT SHOULD BE REWARDED WITH A HIGHER RATE OF RETURN. DO YOU HAVE ANY RESPONSE TO THIS?

A. Yes, I do. As I have noted in my Direct Testimony on pages 13 and 14, AWC-NH does not access equity markets for new common equity. AWC-NH's equity is provided by its parent companies.

Q. IS IT PROPER TO COMPARE THE SIZE OF AWC-NH TO THE WATER PROXY COMPANIES AND MAKE RISK COMPARISONS BASED UPON THE SIZE DIFFERENTIALS BETWEEN THEM?

A. No, it is not proper. Most of the proxy water utilities have multiple subsidiaries that operate in different jurisdictions. Following Ms. Ahern's reasoning, each of the subsidiaries of the proxy water utility utilities should be considered as more risky than the proxy group since, by definition, they would have to be smaller. This reasoning is flawed, since these individual water company subsidiaries do not raise their equity capital directly from investors, but rather do so as a consolidated entity.

Q. IS MS. AHERN AWARE OF THE FACT THAT MOST WATER PROXY COMPANIES HAVE MULTIPLE SUBSIDIARIES AND JURISDICTIONS?

A. Yes, she is. Her response to Request No. Hampton 4-20 (attached as Schedule 15) reflects her acknowledgement that this is the case. Nevertheless, Ms. Ahern continues to maintain that the relevant size risk is that of AWC-NH, since its parent company has chosen to maintain separate subsidiaries in multiple states.

Q. IF THE COMMISSION WERE TO APPROVE MS. AHERN'S PROPOSAL ON SIZE, WOULD THIS BE SENDING THE PROPER SIGNALS TO AWC-NH AND REGULATED UTILITIES?

A. No, it would not. Such a practice, if approved, would actually encourage utilities to split up their operations in order to form smaller entities in an effort to be awarded higher rates of return. Consumers served by smaller utilities would thus end up being charged higher rates to enable these companies to earn artificially higher rates of return.

<u>FINANCIAL RISK ADJUSTMENT PROPOSED BY MS. AHERN</u>

Q. MS. AHERN MAINTAINS, ON PAGES 41-43 OF HER REBUTTAL TESTIMONY, THAT THE COMPANY "EXPERIENCES GREATER FINANCIAL RISK THAN THE WATER GROUP BECAUSE ITS REQUESTED CAPITAL STRUCTURE CONTAINS A GREATER PORTION OF LONG-TERM DEBT THAN DOES THE WATER GROUP. WHAT IS YOUR RESPONSE TO THIS ASSERTION?

A. Ms. Ahern's reasoning is based upon an implicit assumption that AWC-NH is financed independently and not as part of the financial network that it is a part of (as described in my Direct Testimony). As I indicated on page 11 in my Direct Testimony, AWC-NH's ownership structure involves several tiers that culminates with the world-wide Macquarie Group. None of the entities between AWC-NH and Macquarie Group has publicly-traded stock.

I also indicated in my Direct Testimony that AWC-NH is not financed independently and I noted that the Company has refused to answer information requests about the capital structure of affiliated entities.

Q. DID MS. AHERN CONDUCT AN ANALYSIS OF THE INTER-CORPORATE RELATIONSHIPS OF AWC-NH AND ITS RELATED ENTITIES?

A. No, she did not. Her response to Request No. Hampton 4-3 (attached as Schedule 16) indicates that she did not review any capital structure data other than that provided in the Company's filing and Annual Report to the Commission. In addition, her response to Request No. Hampton 4-7 (attached as Schedule 17) indicates that she has not reviewed the trends in the Company's capital structure ratios. As a result, Ms. Ahern's analyses ignore the actual financial structure of AWC-NH and, instead, creates a "hypothetical" presumption that the Company is financed independently.

Q. **HAVE ANY OF THE PARENT OR AFFILIATED COMPANIES OF AWC-NH MADE ANY INFUSIONS OF EQUITY IN RECENT YEARS?**

A. No, they have not. The response to Request No. Hampton 4-22 (attached as Schedule 18) confirms that no equity infusions have been made since the 2002 purchase of the Company by Aquarion. This is significant since the capital structure of AWC-NH is controlled by its parent companies, who have apparently made a decision to finance this company in the manner in which it is capitalized. As a result, it is not proper that this corporate decision should be used as a reason to justify a higher cost of equity.

Q. DOES THIS CONCLUDE YOUR SURREBUTTAL TESTIMONY?

A. Yes, it does.