BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

In the Matter of the Increase of rates and Charges and USF Eligibility by Carbon/ Emery Telecom, Inc.	:	Docket No. 05-2302-01

DIRECT TESTIMONY

OF

THOMAS REGAN

ON BEHALF OF THE UTAH COMMITTEE OF CONSUMER SERVICES

NOVEMBER 16, 2005

REDACTED VERSION

Proprietary information has been redacted from this document.

INTRODUCTION AND STATEMENT OF QUALIFICATIONS

Q. Please state your name and business address.

A. My name is Thomas Regan. My business address is 8625 Farmington Cemetery Road, Pleasant Plains, Illinois 62677.

Q. What is your present occupation?

A. I am an Economist with the firm of William Dunkel and Associates. I have been employed by William Dunkel and Associates since 1994. Since that time, I have regularly provided consulting services in telephone regulatory proceedings throughout the country.

Q. Have you prepared an appendix that describes your qualifications?

A. Yes. My qualifications are shown on Appendix A.

Q. On whose behalf are you testifying?

A. I am testifying on behalf of the Utah Committee of Consumer Services (CCS).

Q. Have you previously participated in telecommunications proceedings in Utah?

A. Yes. I testified on behalf of the CCS in Qwest's petition proceeding for Residential Services Pricing Flexibility in Utah Docket No. 01-2383-01. In addition, I have participated in a number of other telecommunications proceedings in Utah, as shown on Appendix A.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to respond to certain issues in the Carbon/Emery (or the "Company") Application for Increase in Rates and Charges and USF Eligibility and issues in the related Company testimony, exhibits, and data responses. In this testimony, I will address cost of capital and rate design issues.

Q. Can you please summarize your Direct testimony?

A. Yes. I recommend an overall cost of capital of 4.95% be used for Carbon/Emery in this proceeding. Carbon/Emery's capital structure is comprised of *** ***. Carbon/Emery's current overall cost of debt is *** ***.

I recommend that Carbon/Emery's recurring residence one-party service rate be increased from $11.03 to $13.50 per month, and I recommend that Carbon/Emery's business one-party service rate be increased from $19.37 to $23.00 per month. These proposed rates are equal to the Base Affordable Rates established by the Commission. I recommend that any remaining shortfall of revenues under the CCS proposal be recovered through adjustments to Carbon/Emery's switched access rates. This rate design is designed to cover the $392,859 revenue requirement shown on Ms. McCullar's Direct Testimony Schedule RM-1.

COST OF CAPITAL

Q. What Cost of Capital has Carbon/Emery proposed in its filing?

A. Carbon/Emery has proposed an overall cost of capital of 10.05%.[1]

Q. What capital structure does Carbon/Emery propose in its cost of capital calculation?

A. Carbon/Emery proposes to calculate its cost of capital using a hypothetical ratio of 50% equity and 50% debt.[2]

Q. What is Carbon/Emery's actual capital structure?

A. *** [3]***

Q. What cost of debt has Carbon/Emery used in its cost of capital calculation?

A. Carbon/Emery uses a 7.06% cost of debt in its proposed cost of capital calculation.[4]

Q. What is Carbon/Emery's basis for using a 7.06% cost of debt in its proposed cost of capital calculation?

[1] Meredith September 2, 2005 Testimony, page 14, line 3.
[2] Meredith September 2, 2005 Testimony, page 14, lines 14-16.
[3] Carbon Emery's actual capital structure contains ***
***[3]
[4] Exhibit S-3, page 1of 2 of Carbon/Emery's Supplemental Filing.

A. According to its response to DPU Data Request DPU 3.21, Carbon/Emery used the "same cost of capital structure that was the subject of extensive discussion in 2003 with the Division."

Q. What is Carbon/Emery's actual cost of debt?

A. At the end of 2004, Carbon/Emery's overall cost of debt was *** ***, as Carbon/Emery indicated in its response to CCS Data Request 1.4. A copy of this Company response is attached hereto as Schedule TMR-5.

However, a later Carbon/Emery response[5] indicated that the interest rate on one of its loans had increased since the end of 2004. I have adjusted Carbon/Emery's overall cost of debt figure to account for the increased interest rate on that loan. As of September 2, 2005, Carbon/Emery's overall actual cost of debt is *** ***.

Q. In his testimony, Mr. Meredith claims that Carbon/Emery's cost of debt is 6.03%.[6] What is wrong with Mr. Meredith's figure?

A. The 6.03% rate of interest Mr. Meredith provides is before taking into account the fact that Carbon/Emery receives patronage payments from its primary lender (CoBank). After properly taking into account the fact that Carbon/Emery receives patronage payments, the effective overall average rate of interest is *** ***[7]

[5] Carbon/Emery's response to CCS Data Request 3.12.3.
[6] Meredith September 2, 2005 Testimony, page 14, line 19.
[7] Carbon/Emery also has a loan from its Parent company, Emery Telcom. However, the interest rate for the Emery Telcom loan is at the same weighted average of the CoBank interest rates (after patronage payments). Therefore, including the Emery Telcom loan does not have an impact on the overall average interest rate calculation.

As shown on Schedule TMR-5, Carbon/Emery calculates its overall effective cost of debt after accounting for the fact that Carbon/Emery receives patronage payments from CoBank. However, Mr. Meredith adjusted the Company's interest rate by excluding the patronage payments. These patronage payments are similar to a rebate to Carbon/Emery. The patronage payments that Carbon/Emery receives from CoBank effectively reduce the amount of interest that Carbon/Emery pays to CoBank.

The calculation of Carbon/Emery's actual cost of debt of *** *** is shown on Schedule TMR-1.

Q. What is your proposed overall cost of capital for Carbon/Emery in this proceeding?

A. My proposed overall cost of capital for Carbon/Emery is 4.95%. As discussed above, Carbon/Emery has *** *** in its capital structure.

COST OF EQUITY

Q. What cost of equity has Carbon/Emery assumed in its proposed cost of capital equation?

A. Although Carbon/Emery has *** *** in its capital structure, Carbon/Emery has proposed a hypothetical capital structure that is comprised of

50% equity and 50% debt. For the equity portion of its proposed hypothetical structure, Carbon/Emery proposes to use a 12.50% cost of equity.[8]

Q. Is it reasonable to assume that Carbon/Emery's capital structure is comprised of 50% equity in this proceeding?

A. No. Carbon/Emery's capital structure is comprised of ***

*** Carbon/Emery's proposed "hypothetical capital structure" should be rejected. It would not be reasonable to have the Utah State Universal Service Fund (or Utah ratepayers) provide Carbon/Emery with funds to cover ***

***

Q. You indicated that Carbon/Emery * ***, would the Company's proposed cost of equity be reasonable?**

A. No. Even if Carbon/Emery *** ***, the Company's proposed cost of equity is unreasonably high. In the sections that follow, I demonstrate that Carbon/Emery's 12.5% proposed cost of equity is unreasonably high.

Q. What support has Carbon/Emery provided for its proposed 12.50% cost of equity?

[8] Exhibit S-3, page 1 of 2 of Carbon/Emery's Supplemental Filing.

A. As discussed at page 16 of his September 2, 2005 Testimony, Carbon/Emery's witness Mr. Meredith explains that he used the "Risk Premium Method" as a "reasonableness check" to determine if the Company's proposed cost of capital is reasonable. Mr. Meredith's "reasonableness check" calculation results in a 15.67% cost of equity.

Q. What is Schedule TMR-2?

A. Schedule TMR-2 is a copy of Carbon/Emery's data response that shows how Mr. Meredith's 15.67% "reasonableness check" cost of equity was calculated.

Q. What is the "Risk Premium Method"?

A. The equation Mr. Meredith uses in his Risk Premium Method is the same equation as the Capital Asset Pricing Model (CAPM). The CAPM/Risk Premium Method is used to estimate the "risk premium" that should be assigned to a stock. The basic idea behind the CAPM is that investing in stocks carries risk, and therefore in order to entice investors to invest in a stock, the investor requires a "risk premium", which is an additional return over and above what the investor's return would be if he were to invest in a "riskless" or "risk-free" investment.[9] The theory is that the larger the perceived risk associated with a stock, the larger the "risk premium" an investor will require to invest in that stock. A discussion of the "risk premiums" proposed by Carbon/Emery, myself, and the risk premiums calculated by well-known studies regarding the issue, is attached hereto as Schedule TMR-8.

[9] A discussion of the risk-free rate of return is attached hereto as Schedule TMR-9.

Q. What did Mr. Meredith's analysis show about the risk of the small telephone companies like Carbon/Emery?

A. Mr. Meredith's analysis shows that the small telephone companies like Carbon/Emery are less risky than the market average. Therefore, his analysis shows the cost of equity for small telephone companies, including Carbon/Emery, is less than the average market cost of equity.

The risk associated with an individual company's stock may differ from the average risk associated with the market as a whole. In the CAPM/Risk Premium Method Model equation, "Beta" is used to adjust the market equity risk premium to reflect the risk that applies to an individual company's stock. As discussed on page 15 of Mr. Meredith's Testimony, Beta is a measure of a stock's price volatility relative to the market as a whole. The Beta value for a given stock is used as an indicator of the risk attributable to that stock.

A Beta value of 1.0 for a given stock means that the risk associated with the stock in question is equal to the risk for the market as a whole. If the Beta for an individual stock is 1.0, then the equity risk premium for that stock is the same as the average equity risk premium for the market, and no adjustment is needed.

If a stock has a Beta value **less than 1.0**, this means the stock is less risky than the average for the market, and the cost of equity for that stock is less than the average cost of equity for the market.

If a stock has a Beta value **greater than 1.0**, this means the stock is more risky than the average for the market.

Q. What Beta value did Mr. Meredith use for Carbon/Emery in his cost of equity analysis?

A. Carbon/Emery does not have publicly traded common stock. Therefore, there are no available estimates of Beta for Carbon/Emery. In such situations where Beta information is not directly available for a particular company, a common method of estimating Beta for that company is to select a sample of comparable companies that do have published Beta values. Mr. Meredith used this method. Mr. Meredith collected Beta values for five small local exchange carriers in order to estimate the Beta for Carbon/Emery.

Q. What sample of small local exchange carriers did Mr. Meredith select, and what beta values do these companies' stocks have?

A. The Companies that Mr. Meredith selected are HickoryTech, New Ulm, Warwick Valley, CT Communications and North Pittsburgh. All of these companies, with the exception of CT Communications, have Beta values that are less than 1.0, indicating that these companies have risk that is lower than the market as a whole.

The average Beta for the five companies Mr. Meredith selected is 0.73. This effectively means that the equity risk premium for this group of companies is 27%[10] less than the average for the market as a whole.

In response to discovery, Carbon/Emery provided the work paper[11], which shows the Beta values for each of the five companies Mr. Meredith selected. A copy of that workpaper is attached as Schedule TMR-2. The Beta values for the companies Mr. Meredith selected are show below:

BETA VALUES FOR

MR. MEREDITH'S PROPOSED SAMPLE COMPANIES

Sample Company		**Beta Value**
1.	HickoryTech,	0.95
2.	New Ulm	0.12
3.	Warwick Valley	0.65
4.	CT Communications	1.15
5.	North Pittsburgh.	0.80
	Average	0.73

In his analysis, the average "Beta" Mr. Meredith used for Carbon/Emery's was 0.73, which means that he found that Carbon/Emery's cost of equity (***

[10] 1.0 minus 0.73 = 0.27 or 27%.
[11] Exhibit CCS 5.5.2 - "Carbon Emery Risk Premium".

***) is less than the average cost of equity of the market.

Q. Since Mr. Meredith's analysis shows the small local exchange telephone companies have a cost of capital that is less than the average cost of equity for the market, how did Mr. Meredith calculate such a high cost of equity (i.e. 15.67%) for Carbon/Emery?

A. In his analysis, Mr. Meredith used a figure of 19.90% for the expected market return (Rm) in the CAPM/Risk Premium Method Model equation, which is unreasonably high. Mr. Meredith's use of this unreasonably high figure in the equation results in greatly inflating the risk premium, and ultimately his calculated cost of equity.

After Mr. Meredith accounted for the fact that the risk associated with his sample companies is less than the overall market, he arrived at a cost of equity of 15.67%.

Q. What is wrong with Mr. Meredith's 19.90% expected market return (Rm) figure he used in his cost of equity analysis?

A. Mr. Meredith's 19.90% expected market return figure is unreasonably higher than an average, typical or reasonable expected market return. Mr. Meredith used the "Twelve Months Trailing" percentage change in the Dow Jones U.S. Small Cap Index, as reported in the Wall Street Journal on September 2, 2005, which was 19.90%.[12]

[12] Exhibit CCS 5.5.2 to Carbon/Emery's response to CCS Data Request CCS 5.5.2.

It is important to note that Mr. Meredith's analysis of expected market return is based on just twelve months of return data, and is based on only the stocks covered by the Dow Jones U.S. Small Cap Index.

Q. What is the most critical problem with Mr. Meredith's "Reasonableness Check" calculation?

A. The most critical problem with Mr. Meredith's calculation is that Mr. Meredith has selected a very short time period (twelve months) where the return for the Dow Jones U.S. Small-Cap Index was unusually high. He uses only twelve months of market data for the Dow Jones U.S. Small-Cap Index to estimate the expected market return. Since markets have "high" periods during some periods of time and "low" periods during other periods of time, it is important to use a set of data that encompasses a long period of time to avoid selecting a period of time that is not typical or average for the market. The 19.90% return that Mr. Meredith selected for his "reasonableness check" calculation is well above what is typical or average for the market or the Dow Jones U.S. Small-Cap Index.

Q. Can you demonstrate that 19.90% return is an unusually high return for the market index that Mr. Meredith used in his analysis?

A. Yes. An analysis of return data over longer time horizons than Mr. Meredith used, clearly shows that 19.90% is an unusually high expected market return for the Dow Jones U.S. Small-Cap Index. Mr. Meredith used only a specific 12 month period of historical data to arrive at his estimated expected market return of

19.90%. The return for such a short period can vary widely based on the period used. The return for the 12 months Mr. Meredith used was 19.90%. However, as shown below, when a different period is selected, for example the 1-year return as of March 31, 2005, the return was 6.58%. Shown below are the annualized total returns for the Dow Jones U.S. Small-Cap Index over different time frames:

Annualized Total Return - Dow Jones U.S. Small-Cap Index

All data as of March 31, 2005

1-Year	3-Year	5-Year	10-Year	Since Inception (12/31/1991)
6.58%	9.67%	5.10%	12.49%	12.33%[13]

As shown in the summary data above, the annual returns for the Dow Jones U.S. Small-Cap Index over longer time frames than Mr. Meredith used are much lower than 19.90%. In fact, Mr. Meredith's assumed 19.90% annual market return is more than **twice**[14] the 3-year average annual return for the index, and nearly **four times**[15] the 5-year average for the index. The annual return for the index over the longest time horizon (i.e. since its December 31, 1991 inception date) is 12.33%.

[13] Dow Jones U.S. Total Market Index and Dow Jones U.S. Size Indexes, Performance. I obtained this document from the website address: http://djindexes.com/mdsidx/downloads/fact_info/us_TotalMkt_size_facts.pdf. Visited on October 31, 2005.
[14] 19.90% divided by 9.67% = 2.06.
[15] 19.90% divided by 5.10% = 3.9.

Q. Do scholars who study and estimate expected market returns recognize the importance of using data over long periods of time?

A. Yes. Well known scholars who study and estimate expected market returns have recognized the importance of using historical data covering a very long time period in order to develop an accurate estimate of market return. For example, in their Working Paper *"History and the Equity Risk Premium"*, Roger Ibbotson and William Goetzmann stated:

> One of the major issues with statistical estimation of the realized equity risk premium is that a very long time series of stationary returns is required to achieve a high degree of confidence in the estimate. The longer the data series, the more accurate the equity risk premium calculation...[16]

Q. Are you aware of any studies that calculate market return data over long periods of time?

A. Yes. On Schedule TMR-6, I have included a discussion of well-known studies that calculate market return data over long periods of time.

Q. What is a more reasonable estimate for the overall expected market return in the CAPM/Risk Premium analysis?

A. As demonstrated on Schedule TMR-6, long-term analyses show average market returns in the range of 9.76% to 12.39%. To limit the number of issues in dispute with respect to this issue, I propose to use the average annual market return for the Dow Jones U.S. Small-Cap Index over the longest time period available, which is December 31, 1991 through March 31, 2005. The average annual return over that

[16] Yale ICF Working Paper No. 05-04, April 2005, *"History and the Equity Risk Premium"*, William Goetzmann and Roger Ibbotson, Yale School of Management, Yale University, page 9.

period was 12.33%, which is at the high end of the range of long-term analysis of overall market return.[17] Therefore, an (Rm) figure of 12.33% is a more reasonable figure to use in the CAPM equation discussed earlier in this testimony.

Q. You indicated that it would be more reasonable to use 12.33% as the expected market return. What cost of equity does the CAPM/Risk Premium Method calculate for a small telephone company like Carbon/Emery when this figure is used?

A. As discussed, small telephone companies like Carbon/Emery have less risk than the overall average for the market. Therefore, the risk premium for Carbon/Emery will be less than that for the overall market. Using the 12.33% expected market return figure, and applying the "Beta" values for the small telephone companies selected by Mr. Meredith, the CAPM/Risk Premium Method calculates a cost of equity of 9.78%, as shown on Schedule TMR-7.

Q. Above, you indicated that when a more reasonable expected market return figure is used, the CAPM/Risk Premium Method calculates a cost of equity of 9.78%. Do you believe that this CAPM/Risk Premium calculation is an accurate measure of Carbon/Emery's actual cost of capital?

A. Not necessarily. For example, the CAPM/Risk Premium Method is one of the methods traditionally used in regulatory rate-of-return determinations, but it does not directly address the true issue before the commission. The CAPM/Risk Premium's use of historical market return as the expected market return in its

[17] Normally, I would advocate the use of market return data over a longer period of time.

equation is problematic. How stockholders have fared in the stock market historically is not really relevant to answering the question we are asking in this proceeding, as I discuss in the next section of this testimony.

ACTUAL MARKET PRICE AND EARNINGS METHOD (AMPE)

Q. What use is made of the cost of equity determination by the Commission?

A. The cost of equity determination is used to determine what level of earnings the Company's rates/USF draw will be designed to produce. For example, if the Commission determined that the cost of equity was 7.1%, then the rates/USF draw would be designed to produce $7.10 of annual earnings for Carbon-Emery for each $100 of intrastate regulated investment that was provided by the stockholders.

Other things like dividends are sometimes discussed, but the Commission does not set dividends. The earnings are for the shareholders, but the board of directors chooses how much of those earnings are paid in dividends, and how much is retained for growth. The Commission determines what level of earnings on stockholder investment is to be the target for rates/USF draw.

Q. What is the goal in determining the earning per $100 of regulated stockholder investment in Carbon-Emery?

A. The goal should be to set the earnings target of Carbon-Emery to be the same earnings Carbon-Emery would need to attract capital investment in the open market.

In the open market, the investors know the history of earnings of a company. They also have available forecasts of the future earnings. For major companies, normally more than a dozen different analysts provide earnings forecasts. In addition, the current price of a stock incorporates all other **known** information (e.g. expected inflation, expectations regarding interest rates, expected government actions, etc.) that could potentially affect the company's earnings, or the price of its stock. In the market, the investors consider all of the known information, and then they effectively bid the stock price up or down to arrive at a market price that the investors are willing to pay for the level of earnings the company has. It is clear that earnings affect the price of a stock. If earnings are lower than expected, the stock price often decreases; if earnings are higher than expected, the stock price often increases). For Carbon-Emery, the reasonable earnings per $100 of stockholder investment should be the earnings that the investors would be willing to pay $100 for in the open market for a similar company.

Q. What level of earnings does Carbon-Emery need to attract $100 of equity capital investment?

A. Carbon/Emery does not have publicly traded common stock, therefore there is no direct reference to the stock price that would correspond to Carbon/Emery's current earnings level. However, an indirect estimate can be made by selecting a sample of comparable companies that do have commonly traded stock and available earnings information. In his Testimony, Mr. Meredith selected five small local exchange carriers that he believes are similar to Carbon/Emery. I will use these same sample companies to make this determination.

Q. What level of earnings do the sample companies that Mr. Meredith selected need to attract $100 of equity capital investment?

A. For the sample companies that Mr. Meredith selected, earnings ranging between $5.65 and $7.19 are needed to attract $100 in capital investment. Therefore, the current actual market cost of equity, using the actual market price and earnings for these sample companies ranges between 5.65% and 7.19%, as shown below:

CALCULATION OF THE EARNINGS PER $100 OF STOCKHOLDER INVESTMENT THAT IS NEEDED FOR INVESTORS TO BE WILLING TO PAY $100 FOR IN THE OPEN MARKET FOR A SIMILAR RISK COMPANY

Company Name	Recent Stock Price	P/E	Earnings Needed To Attract $100 of Investment	ROE Needed To Attract $100 of Investment
			($)	(%)
Hickory Tech	$9.02	15.3	$6.54	6.54%
New Ulm	$11.32	17.7	$5.65	5.65%
Warwick Valley	$23.02	16.1	$6.21	6.21%
CT Communications	$11.32	17.7	$5.65	5.65%
North Pittsburgh	$19.50	13.9	$7.19	7.19%

Source : ValuLine Investment Survey, September 30, 2005.

Q. Why is the cost of equity estimate calculated using the actual market price and earnings (AMPE) method shown above, the most accurate estimate of a company's cost of equity that can be made?

A. As discussed above, investors bid stock price up and down (similar to an auction) based upon all known information about a company. The current market price and current earnings information provide the most accurate and up-to-date information regarding what earnings level a Company requires to attract equity capital in the current actual market. This is precisely the question we are attempting to answer in this proceeding.

The CAPM/Risk Premium method, by its design, cannot be as accurate or as up-to-date with respect to what earnings level a Company requires to attract equity capital in the current actual market. Mr. Meredith is using the CAPM/Risk Premium method, which measures how well investors fared historically in the stock market, in an attempt to measure what earnings level a Company requires to attract equity capital in the current actual market. The AMPE method goes directly to the actual current market to get the actual answer to the question, not just an estimate. The AMPE method **directly** measures what earnings level a company requires to attract equity capital in the current actual market. The stock market directly tells a company or the Commission what earnings level it needs to attract equity capital.

RATE DESIGN

Q. What rate changes does CCS propose in this proceeding?

A. As shown on Schedule TMR-10, CCS proposes to increase Carbon/Emery's recurring residence one-party service rate from $11.03 to $13.50 per month, and Carbon/Emery's business one-party service rate from $19.37 to $23.00 per month. These proposed rates are equal to the Base Affordable Rates established by the Commission.[18]

[18] The Base Affordable rate is $13.50 for residence and $23.00 for business, as shown on page 1 of Carbon/Emery's September 1, 2005 Supplement to Application for Rate Increase and USF Eligibility.

I recommend that Carbon/Emery's switched access rates be adjusted to produce an additional $58,663 in annual revenues, which is the remaining revenue requirement shortfall under the CCS proposal.

This rate design is designed to cover the additional $392,859 revenue requirement shown on Ms. McCullar's Direct Testimony Schedule RM-1 .

Q. Does this conclude your Direct testimony?

A. Yes.