BEFORE THE

STATE OF VERMONT

PUBLIC SERVICE BOARD

Investigation into Memorandum of Understanding between Central Vermont Power Service Corporation and Vermont Department of Public Service	**)** **)** **)**	**DOCKET NO. 6866**

DIRECT TESTIMONY OF

NEIL H. TALBOT

ON BEHALF OF

AARP

November 18, 2003

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I. INTRODUCTION AND QUALIFICATIONS

Q. PLEASE STATE YOUR NAME, OCCUPATION AND ADDRESS.

A. My name is Neil H. Talbot. I am an economic and financial consultant affiliated with Synapse Energy Economics, Inc. My business address is 22 Pearl Street, Cambridge MA 02139.

Q. WHAT ARE YOUR EDUCATIONAL QUALIFICATIONS?

A. In addition to earlier degrees in government and law from the University of Cape Town, South Africa, I obtained a master's degree in economics from Cambridge University, England in 1972, and a Master of Science in Finance (MSF) degree from Boston College in 1992.

Q. PLEASE OUTLINE YOUR WORK EXPERIENCE.

A. I was employed as an economist by consulting companies for a period of 26 years. From 1968 to 1972 I worked with the Economist Intelligence Unit, London; from 1973 to 1979 with Arthur D. Little, Inc., Cambridge, MA; and from 1980 to 1994 with Tellus Institute (formerly Energy Systems Research Group), Boston, MA. In 2000, I became affiliated with Synapse Energy Economics, Inc, after a period as an independent consultant.

Q. PLEASE OUTLINE YOUR EXPERIENCE WITH UTILITY CASES SUCH AS THE PRESENT PROCEEDING.

A. Since 1973, my consulting work has focused on electric utility planning, rates, regulation and finance, and for the past several years, I have concentrated on issues related to the restructuring of the electric industry. As will be readily apparent from a review of my professional biography attached as

Exhibit___(NHT-1), I have testified in many utility regulatory proceedings and I have testified on rate of return and financial matters in a number of cases. In July of this year, I filed direct and supplemental testimony on rate of return for Empire District Electric Company before the Oklahoma Corporation Commission.

Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING?

A. I am testifying on behalf of AARP.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS CASE?

A. In my testimony I address the inadequacy of the filing by Central Vermont Public Service Corporation ("CVPS" or "the Company") in this matter. I also address the earnings cap proposed in the Memorandum of Understanding (MOU) entered into between the Company and the Department of Public Service (DPS), and I estimate the Company's cost of common equity capital.

Q. PLEASE EXPLAIN HOW YOUR TESTIMONY IS ORGANIZED.

A. Section II presents a summary of the points made in my testimony and my recommendations. The remainder of my testimony is presented in three sections, as follows:

Section III addresses the inadequacy of the Company's filing in this matter;

Section IV covers estimates the Company's cost of capital;

Section V contains conclusions and recommendations.

II. SUMMARY AND RECOMMENDATIONS

Q. WHAT IS THE SCOPE OF YOUR TESTIMONY?

A. My testimony addresses the Memorandum of Understanding entered into between CVPS and the DPS, with a focus on the inadequacy of the case made by the Company in this proceeding, and on the proposed earnings cap of 10.5%. My testimony contains a substantive analysis of CVPS's cost of common equity capital.

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. The major points made in my testimony are the following:

1. It appears that this proceeding is in effect a rate case, but it does not provide an opportunity for intervenors, the DPS or the Board to thoroughly investigate the Company's cost of service.

2. In light of previous findings of imprudence in connection with the HQ-VJO Contract, it behooves the Company to show in this proceeding that it is acting prudently to reduce its power purchasing costs. This is particularly important in light of the sale of Vermont Yankee to Entergy and the repurchase of power from that company.

3. In my opinion, the return on equity cap of 10.5% under the MOU is higher than the level warranted by the Company's cost of common equity, which I estimate at 10.0%.

4. The Company's estimated revenue deficiency is virtually eliminated if its cost of common equity is set at 10.0%. This underscores the importance of correctly determining the other elements of CVPS's cost of service.

5. My primary approach in developing a cost estimate for common equity capital for CVPS is the DCF method applied to a group of eight electric utilities that are similar to CVPS and include CVPS itself. While some of these companies, considered individually, appear to be more or less risky than CVPS, as a group they have risk characteristics that are, considered collectively, closely comparable to those of CVPS. They are all small cap electric utility companies as defined by Value line. They all have positive earnings and dividends forecasts according to Value Line.

6. In applying the DCF approach, the most important element is the projected growth rate of company dividends. I conducted two analyses, one using only Value Line's forecasts of earnings growth for the eight companies, as a proxy for expected and sustainable dividends growth. The DCF cost of equity estimate for the group based on only Value Line forecasts is 7.6%. In the other analysis, I substituted Morningstar earnings growth projections for those companies – five of the eight in the group – for which Morningstar provides earnings forecasts. The enriched data base increased the cost of equity estimate to 10.6%.

7. As a check, I applied the Capital Asset Pricing Model (CAPM). My CAPM analysis produced an estimate of 9.15%. While the interest rate component of the CAPM analysis reflects current conditions, the risk premium component is based on long-term risk premiums of stocks over bonds and varies from time to time. Accordingly, there is a considerable degree of imprecision in a CAPM-derived estimate. However, the CAPM

analysis clearly supports an intermediate estimates somewhere between the higher and lower estimates derived by the DCF analysis.

8. Long-term and short-term U.S. interest rates are close to their lowest levels in over four decades. At this point, although it appears that the economy is experiencing a recovery, inflation is likely to remain subdued relative to historical rates in the near future, and interest rates are likely to remain low, according to the Federal Reserve Board's recent statement on October 28, 2003.

9. The electric utility industry has been through a period of turmoil associated with partial deregulation and restructuring. Utilities like CVPS that are still regulated (and are likely to remain so for the time being) are, however, relatively stable from an investor standpoint.

10. CVPS has been performing quite well over the last several years. Its stock returned 24.3% in 2000, 44.8% in 2001, 15.4% in 2002, and 28.9% year to date in 2003. Such a performance is impressive compared to that of the general market and compared to the electric industry.

11. In the current GMP case that also contains a Memorandum of Understanding, the Company and the DPS have proposed an earnings cap of 10.5% on common equity. A similar earnings cap is proposed in this matter for CVPS. It is also set at 10.5% and is, unlike GMP's, only partially retrospective to 2003. By many comparisons, CVPS as a company is less risky than GMP from a financial standpoint. It has considerably less long-term debt, a lower beta, a higher interest coverage

ratio, and a higher market capitalization than GMP. Morningstar gives GMP a "B-" for financial health, while it gives CVPS an "A-." In its previous orders for these two companies, the Board approved an ROE cap of 11.25% for GMP and 11.0% for CVPS. Under current conditions, if an ROE cap of 10.5% is appropriate for GMP based on its comparables and financial distress, then CVPS should have a lower ROE cap. With this in mind, I recommend an ROE cap for CVPS of 10.0%. I also recommend that it be fully retroactive to 2003.

Q. PLEASE SUMMARIZE YOUR RECOMMENDATIONS.

A. The setting of rates for CVPS should be preceded by a thorough investigation of its costs, and of the prudence of its power supply planning and procurement. This is not possible in the current proceeding. Further, I do not believe that the proposed MOU is favorable to ratepayers, in part because it provides for too high an earnings cap, and one which is only partly applicable to 2003 earnings. In the circumstances, I recommend that the Board withhold approval of the MOU.

III. INADEQUACY OF THE COMPANY'S FILING

Q. PLEASE DESCRIBE BRIEFLY THE CONTEXT OF THIS PROCEEDING.

A. In its Opinion and Order of June 26, 2001, the Board set the Company's rates through the end of 2003 subject to an earnings cap of 11.0% return on equity, any excess to be returned to ratepayers. The Board stated that the "resulting rates, which are in excess of the rates we would establish using a traditional costs-of-service methodology, will provide CVPS with sufficient revenues to operate consistent with its public service obligations, maintain an investment-grade credit rating and access to capital markets at reasonable cost, and remain financially viable." (page66). With regard to the HQ-VJO contract, the Board stated that "there will be no further HQ-VJO Contract disallowances or penalties proposed in any proceeding to establish the Company's rates based on CVPS's prudence with respect to any act or omission that occurred prior to the date of this Order." (page 37) However, the Board also made the following statement:

> Our decision to allow full rate recovery in the future for power purchased under the HQ-VJO Contract is not absolute. CVPS retains responsibility to prudently manage the Contract in the future. Neither the MOU itself, nor our approval of the MOU, absolves the Company from this duty. If CVPS does not prudently manage the HQ-VJO Contract in the future, the Board may disallow imprudent costs. We also note that our decision not to re-institute an ROE penalty in the future only applies to those specific management failures that occurred prior to 1994 and that were identified in the Dockets 5701/5724 Order. (page 37)

Q. WHAT SUBSEQUENT DEVELOPMENTS HAVE AFFECTED THE COMPANY'S POWER SUPPLY PLANNING?

A. CVPS has sold its share of the Vermont Yankee nuclear station to Entergy. The rationale for doing so was that the sale would reduce the Company's power costs. In its order of June 2002 approving the sale, the Board noted that the sale and associated purchased power agreement entered into with Entergy were expected to reduce the Company's cost of service and might result in a rate reduction. The Board required the Company to file an updated cost of service study, based upon a 2002 test year with adjustments for 2003 and 2004 in order to determine the propriety of such a reduction.

Q. DOES THE COMPANY'S COST OF SERVICE STUDY SUPPORT A RATE REDUCTION?

A. No. It suggests that under current rates it has a revenue requirements deficiency of 0.8% for 2003 and 4.6% for 2004. As a result of this analysis, the MOU entered into between the Company and the DPS contains no rate reduction.

Q. IN YOUR OPINION, IS THE COMPANY'S CASE FOR MAINTAINING CURRENT RATES UNCHANGED WELL BASED?

A. No. My overriding concern is that the present proceeding appears to be a rate case that does not allow the DPS, intervenors such as AARP, or the Board itself to undertake the requisite investigation of the Company's cost and rate situation. Such an investigation should cover the prudence of the Company's power supply planning since the Board's last orders on this subject. Given the findings of the Board's June 26, 2001 order regarding the Company's prior imprudence, I believe

it would be appropriate to require the Company to make a positive showing that it's power supply planning and procurement have been prudent since that time. Only after a thorough investigation should the Board make its rate determination.

Q. DOES THE COMPANY'S COST OF CAPITAL AFFECT THIS MATTER?

A. Yes. The Company's cost of capital is relevant in two respects. First, it is part of the determination of the Company's revenue requirements in 2003 and 2004. The Company's revenue deficiency of 0.8% is based upon on a cost of equity capital of 11.0% (2003 cost of service, Schedule 3), as provided for in the previous rate proceeding. However, according to the analysis presented in the following section of my testimony, CVPS's cost of equity has fallen to a current level of 10.0%. The Company's estimated revenue deficiency for 2003 is $2,207,000 (2003 cost of service, Schedule 1, line 42). A one hundred basis point reduction in cost of equity from 11.0% to 10.0% would reduce the revenue deficiency estimate by $1,870,000, i.e., it would eliminate 85% of the deficiency.

Q. HOW DOES THIS AFFECT THE NEED FOR A THOROUGH COST AND RATE INVESTIGATION?

A. If the very existence of a deficiency of any significant magnitude can be called into question by a review of cost of equity alone, how much more so might it be affected by a thorough cost and rate investigation, including a review of the Company's power planning and procurement? Yet the Company has, as far as I am aware, not made any showing in this proceeding that it has acted prudently in dealing with its high-cost power purchase commitments.

Q. IN WHAT OTHER RESPECT DOES COST OF EQUITY AFFECT THIS

MATTER?

A. The MOU includes an earnings cap set at 10.50% return on equity. If this level is higher than necessary to reflect the Company's cost of equity and to maintain the Company's financial viability, the MOU is unfavorable to ratepayers in this respect.

IV. COST OF EQUITY ANALYSIS

IV.A DCF Analysis

Methodology

Q. PLEASE OUTLINE THE DCF APPROACH YOU USED.

A. The Discounted Cash Flow (DCF) method estimates the return required from an investment in common stocks by finding the rate of return or discount rate that is implied by the current price of the stock and the dividends expected to be paid by the stock. For example, if an investor is willing to pay $100 for a stock paying a dividend of $10 per year in perpetuity, then the required return that is implied by the relationship between the price and the dividend stream is 10%. In this example, the *dividend yield* of 10% is all that needs to be considered; in practice, dividends tend to increase over time and it is necessary to add a term to the DCF equation to account for the *growth* of dividends in the future. Where a constant growth rate is assumed, the formula for the DCF calculation is:

$$k = D_1/P_0 + g$$

where

k is the required return;

D_1 is the dividend in the next year;

P_0 is the current price of the stock; and

g is the growth rate.

This formula boils down to the addition of the current dividend yield (adjusted

for one year's expected growth of dividends) and the growth rate.

Selection of a Risk-Comparable Group of Companies

Q. DID YOU APPLY THE DCF METHOD TO CVPS ITSELF OR TO A GROUP OF COMPANIES?

A. It is certainly possible to apply the method directly and only to the company in question. For statistical reasons, however, it is preferable to place reliance not only on the company in question, but also on an analysis of a group of companies. The data for any one company may contain random elements or "noise," which tend to be averaged out in the data for a group of companies.

Q. WHICH COMPANIES DID YOU SELECT?

A. The guiding criterion in the selection process should be to find a group of companies that have similar risk profiles to that of CVPS. I believe that investors take into account both quantitative and qualitative considerations when assessing the risks of companies. Importantly, I draw a distinction between regulated and non-regulated companies. While some regulated companies may have similar quantitative profiles to those of some non-regulated companies, investors rightly believe that the regulated monopoly context provides a safety net for a regulated company that does not apply to other companies. A simple example makes this point: a non-regulated company has no protection against "bypass" by other suppliers and customers often switch back and forth between competitive suppliers, while CVPS does not face the likelihood of retail competition in any of its jurisdictions. Likewise, a non-regulated company has no such thing as an

"allowed rate of return," while a regulated utility can request a rate increase if its return falls below a cost of capital benchmark. Distinctions between industries are recognized by investment services, which usually present their discussions of stocks on an industry-by-industry basis and commence the analysis of the stocks in each industry by discussing the general situation of that industry. For these reasons, I selected a group of *electric utility companies* only.

Q. FROM WHICH SOURCE DID YOU SELECT THESE COMPANIES?

A. I selected companies from Value Line's list of electric utilities.

Q. WHAT KINDS OF RISKS ARE IDENTIFIED BY INVESTORS?

A. By risk, investors are primarily concerned about the possibility of losing money, *i.e.*, the chance of suffering a loss. More generally, however, risk can be defined as the uncertainty, variability or variance of a security's returns. A risk-free security is one that has fixed or certain returns, while a risky security has uncertain returns. The variability of common stock returns reflects both the *business risk* facing the company as a whole, and the additional *financial risk* resulting from the company's degree of debt leverage.

Q. DID RISK CONSIDERATIONS LEAD YOU TO SELECT A SUB-GROUP OF THE VALUE LINE ELECTRIC UTILITY COMPANIES, RATHER THAN THE WHOLE GROUP?

A. Yes. There is evidence that investors regard smaller company stocks as more risky and therefore require higher rates of return from investments in smaller companies. This is, I believe, partly true of smaller electric utilities, even though they are regulated and relatively long-lived and low-risk when compared with

other small companies, and tend to be larger than most small non-utility companies. I used as my "universe" of companies those electric utilities that are described as "Small Cap" by Value Line, which means that their market capitalization is less than approximately $1 billion. The Value Line Investment Survey lists 15 electric utility companies as Small Cap.

Q DID YOU APPLY ANY FURTHER SCREEN TO THESE SMALL CAP COMPANIES?

A. Yes. I eliminated those companies that did not have positive earnings and dividend growth according to Value Line. Since the DCF method requires projections of dividends (or earnings as a proxy for dividends), negative growth projections can be problematic. In this group of companies, seven of the fifteen companies did not show positive dividends and earnings. This left eight companies on my comparable company list, which is a reasonable number. The list of Small Cap companies and the screening process is shown in Schedule 1 attached to my testimony.

Q. ARE THESE COMPANIES COMPARABLE TO CVPS IN TERMS OF INVESTOR-PERCEIVED RISK?

A. Yes. As shown in Schedule 2, CVPS is somewhat more risky than the average company according to some measures (S&P Long Term Corporate rating, market capitalization), somewhat less risky according to others (beta, common equity ratio, interest coverage) and the same according to two measures (Value Line Safety and Financial Strength). Overall, the risk indicators for the group are very similar to CVPS's, taking all the measures into account.

Implementation of the DCF Approach

Q. WHAT SOURCES OF DATA DID YOU USE?

A. I obtained share prices for current and recent months from Yahoo Finance dated October 28, 2003, and current dividends from Value Line. As an estimator of dividend growth in the future, I first used Value Line's five-year earnings forecasts contained in their Aug 5, Sept 5, and Oct 3, 2003 issues. A review of the dividends and earnings of my group of comparable companies showed that dividend payout, which averages 62%, is not excessive, implying that it should not be difficult for these utilities to sustain dividend increases in step with earnings increases, consistent with strengthening their balance sheets. Value Line predicts that these companies will increase their dividends somewhat more rapidly than their earnings (See Schedule 4.) However, Value Line's earnings projections for some of these companies appear to be low, and to develop an alternative forecast I supplemented the Value Line projections with earnings projections from another source, Morningstar. Five of the eight companies were covered by Morningstar (see Schedule 8). (I reviewed a third source, Thomson First Call, but used the Morningstar estimates because Morningstar covers more companies and, for those companies covered by both sources, the estimates are nearly identical.)

Q. IN IMPLEMENTING THE DCF APPROACH, PLEASE EXPLAIN HOW YOU CALCULATED CURRENT DIVIDEND YIELD.

A. For each company, I obtained the latest quarterly dividend from Value Line

dated Aug 5, Sept 5, and Oct 3, 2003. I annualized the dividend and projected it one year ahead to reflect a year's growth. I then averaged the latest current spot prices for the companies' stocks as of October 28, 2003, with the beginning-of-month prices for the four months July to October, 2003, i.e., I calculated the simple average of the five data points.

Q. PLEASE COMMENT ON YOUR USE OF AVERAGE STOCK PRICES FOR RECENT MONTHS RATHER THAN RELYING EXCLUSIVELY ON THE LATEST "SPOT" STOCK PRICES.

A. There has been considerable debate about this issue over the years. On the one hand, it is desirable to stabilize the stock price data by averaging over a period of time. On the other hand, it is useful to incorporate the up-to-date information contained in the latest spot price. In this case, since there has been a run-up in stock prices in recent months, I thought it wiser to use an average rather than rely upon spot prices that could change quite considerably from one month to the next. The use of averages has the effect of matching prices and dividends, and, in this particular case, tends to slightly increase the DCF estimates for the group (see Schedule 3 for stock prices).

Q. PLEASE EXPLAIN HOW YOU ESTIMATED DIVIDEND GROWTH FOR THE SMALL CAP GROUP OF ELECTRIC UTILITIES.

A. As noted earlier, I used Value Line and Morningstar earnings forecasts as the best indicator of future dividend growth. As can be seen in Schedule 4, the Value Line earnings growth projections average 3.6% per year, which is a rather low

estimate. The inclusion of Morningstar earnings growth projections where available substantially increased the growth projection for the group to 6.5%, which, by contrast, appears rather high (see Schedule 9).

Q. HOW DO THESE DIVIDEND YIELD AND GROWTH PROJECTIONS TRANSLATE TO YOUR SUGGESTED ROE?

A. Recall that the standard DCF formula is as follows:

$$k = D_1/P_0 + g$$

where

k is the required return;

D_1 is the dividend in the next year;

P_0 is the current price of the stock; and

g is the growth rate.

For the comparable group of companies, a summary calculation using Value line only earnings is as follows. Please see Schedule 5 for a more detailed calculation by company.

$D_1/P_0 = 1.10/26.53 = 0.041$ or 4.1%, which is the yield term. Calculation of yields by company and then averaging gives a more accurate 4.0%.

g = .036 or 3.6%, which is the growth term.

From the above, k = 0.040 + 0.036 = 0.076 or 7.6%.

Using the Morningstar earnings and the same calculation, we see:

$D_1/P_0 = 1.13/26.53 = .043$, which is the yield term. (In this case changed when calculated by company and then averaged the more accurate average yield is 4.1%).

g = .065, which is the growth term.

From the above, k = 0.041 + 0.065 = 0.106 or 10.6%.

Q. IN YOUR OPINION, HOW SHOULD THESE TWO ESTIMATES OF 7.6% AND 10.6% BE EVALUATED AND RECONCILED?

A. While a degree of scatter or "noise" is inevitable in applying the DCF analysis to a group of companies, some of the Value Line estimates appear to be unreliable in this instance. A review of the final column in Schedule 5 shows that no fewer than three of the eight company-specific estimates are implausibly low, ranging from 3.6% to 4.3%. However, while I think the Morningstar data make the company-specific estimates more plausible (see final column on Schedule 9), I am disinclined to rely exclusively on these somewhat high growth estimates. Rather, while giving more weight to the 10.6% estimate derived with Morningstar as well as Value Line data in Schedule 9, I believe some weight should also be given to other sources of information.

IV.B CAPM Application

Q. DID YOU DEVELOP ANY EQUITY COST ESTIMATES USING OTHER

METHODS?

A. Yes. I used the CAPM approach to obtain an alternative estimate as a check on my DCF results. I generally do not believe that this method or other risk-premium approaches are very reliable, owing partly to the instability of the risk premium itself. However, I believe it is useful, at a minimum, to use the CAPM method as a check.

Q. PLEASE EXPLAIN THE IDEA UNDERLYING THE CAPM APPROACH.

A. The CAPM method uses a formula to estimate the return required for a stock based upon the risk level of the stock as compared to the market as a whole. Earlier, I described investors' concerns about risk as the fear of losing money, or more generally, uncertainty about the future returns of an investment. Modern portfolio theory has taken the analysis of risk a step further by dividing variability into company-specific and "systematic" components. The idea underlying this distinction is that in a portfolio of investments, it is possible to diversify away company-specific risk by investing in a number of companies. This leaves only variability that *cannot* be diversified away because it reflects the risk that *all* securities share, *i.e.*, the risk that the whole investment market (in practice usually the whole stock market) will rise and fall together.

The Capital Asset Pricing Model (CAPM) formalizes systematic or market risk in the concept of "beta." The stock market as a whole has a beta of one, by definition. Individual securities range from having a negative beta ("hedge" securities that change in value in the opposite direction to the market), to a positive beta less than one (relatively low-risk securities) and a positive beta

greater than one (relatively risky securities).

The CAPM formula is as follows:

$$k = r_f + (b \times (r_m - r_f))$$

where k is the required rate of return on common equity,

r_f is the risk-free rate of return,

b is the "beta" measure of market risk for these companies, and

r_m is the required return on the market as a whole.

Note that in this formula $(r_m - r_f)$ is the difference between the expected return on the market and the risk-free rate of return, *i.e.*, it is the risk premium required on the market basket of securities as a whole. When multiplied by the appropriate beta for the group of stocks being analyzed, the risk premium on the market basket is calibrated to the appropriate level for the group of stocks. This calibrated risk premium is added to the risk-free rate to obtain the total return required for this group of stocks.

Q. WHAT SOURCES OF DATA DID YOU USE?

A. I obtained current estimates of the risk-free rate of return using Three-Month Treasury bill and Thirty-Year Treasury bond rates, which (as of November 11, 2003, as reported in the New York Times) are at 0.93% and 5.27% respectively. To these, I added long-term historical risk premiums reported by Ibbotson Associates, in their *2003 Yearbook*, for large-company and small-company stocks. These premiums above Treasury bill and Treasury bond rates range from 3.97 to 8.12 percentage points – see Schedule 6.

Q. WHAT DOES YOUR CAPM EXERCISE INDICATE WITH REGARD TO THE COST OF COMMON EQUITY FOR CVPS AND OTHER SMALL CAP ELECTRIC UTILITY COMPANIES?

A. The average beta for the group of Small Cap companies that I identified in Schedule 1 is 0.62. A critical variable in the analysis is the distinction between small and large companies because in the Ibbotson Associates data, the long-term market return for small companies is 16.9%, compared with only 12.2% for large companies. The main issue then is where on the spectrum between "small" and "large" the comparable companies belong. The average market capitalization for the group is $577 million (see Schedule 2). The Ibbotson data has used different sources of information for different time periods. For earlier years it defines "small" companies as those that were in the bottom quintile of New York Stock Exchange stocks, i.e., the smallest fifth. For more recent years it has included NASDAQ and other stocks. Currently, the cut-off is a market cap of $483 million, and the weighted average cap of "small" stocks is $239 million. It seems clear that Small Cap utilities combine features of large companies – larger size than the average "small" stock, longevity, and relatively secure regulated markets – with size characteristics close to those of Ibbotson Associates' "small" companies. In these circumstances, I chose to simply average the returns by using small and large company risk premiums in my CAPM analysis. The CAPM result – see Schedule 6 -- is 9.15%. This supports my sense that the higher DCF result calculated with Morningstar as well as Value Line data shown in Schedule 9 is rather high.

IV.C Best Estimate of Cost of Equity Capital for CVPS

Q. HOW DO YOU PROPOSE TO RECONCILE THE ABOVE ESTIMATES OF COST OF COMMON EQUITY CAPITAL?

A. I reviewed certain broader sources of information as a guide to the use of estimates derived from these detailed calculations. First, I note that the actual earned returns on common equity (ROEs) of this group of electric utility companies currently average 9.50% according to Value Line. (See Schedule 7) Estimates for the broader electric utility industry differ – Value Line (October 3, 2003) estimates actual electric utility ROE for 2003 at 11.3%, while Business Week (November 17, 2003) estimates 9.2% for the 12 months ended September 30, 2003. I note that market to book ratios for the stocks of my group of companies currently average 149% (see Schedule 7), which suggests that their current returns are at least adequate, and more likely a bit rich. A market to book ratio closer to 100% would be adequate to enable investors to sell their stocks and recover the actual book costs of their investments. Likewise, a market to book ratio closer to 100% would still enable the Company to issue stock without diluting book value per share.

Q. HAVE YOU REVIEWED COMMISSION-ALLOWED RATES OF RETURN ON EQUITY?

A. Yes. Allowed returns have generally declined in recent years. (See Schedule 10) The latest issue of Public Utilities Fortnightly (November 15, 2003) contains a survey of ROE rulings (pages 33-36). There is a range from under 10.0% to over 12.0%. The factors discussed in the Fortnightly article are general cost of capital,

as measured by interest rates, and risk.

Q. IN THIS CASE, ARE ACTUAL RETURNS OR ALLOWED RETURNS MORE RELEVANT?

A. Since the earnings cap applies to actual earned returns, actual returns are more relevant in this proceeding.

Q. WHAT WAS THE ESTIMATE OF CVPS'S COST OF CAPITAL ACCORDING TO DPS CONSULTANTS THE COLUMBIA GROUP?

A. The Columbia Group recently estimated the Company's cost of equity at 9.5%.

Q. WOULD A 10.0% RETURN ON EQUITY ALLOW THE COMPANY TO ACHIEVE ADEQUATE INTEREST RATE COVERAGE?

A. Yes. The Company is currently earning only 8.5% on common equity, has before-tax interest coverage of 4.1 times according to Value Line, and its securities are rated investment grade. An increase in actual ROE to 10% would obviously improve its financial profile.

Q. DID YOU REVIEW OTHER SOURCES OF INFORMATION ON THE COST OF CAPITAL TODAY?

A. Yes. As shown in the table below, I reviewed the broad trends in interest rates, leading up to the current interest rates I used in my CAPM analysis. Data below is from the Federal Reserve.

	Current	Year Ago	Average (1990-2000)
90-day T. Bill Rate	0.93	1.30	4.95
30-yr T. Bond Rate	5.27	5.39	6.68

It is also apparent from the table that current interest rates, both long-term and short-term, are low compared with last year and the ten-year period before that. They are also significantly lower than the long-term averages calculated by Ibbotson Associates, which are 3.8% for Treasury Bills and 5.8% for 30-year Treasury Bonds. It is evident that short-term interest rates have dropped most dramatically, by three or four percentage points from longer-term averages. The Federal Reserve Board is currently holding short-term interest rates at 45-year lows. However, long-term interest rates, as reflected in the 30-year Treasury bond rate, have also fallen significantly. The low level of interest rates provides support for low estimates of the cost of equity capital than would have been reasonable in regulatory proceedings before the Federal Reserve Board's interest rate cuts and the drop in inflation.

Q. DO YOU HAVE ANY OBSERVATIONS ON THE ECONOMIC OUTLOOK?

A. The economy now seems set for growth with low inflation, according to consensus forecasts. While U.S. interest rates have risen somewhat from their lows at mid-year, they are still close to their lowest levels in four decades. The cost of capital to utility companies like CVPS that can issue investment grade securities also remains low. Inflation is likely to remain subdued, even if the

economy continues to grow. This is clear from the Federal Reserve Board's statement of October 28, 2003, explaining that its current policies can be maintained for a considerable period.

Q. HOW DOES THE CONDITION OF THE ELECTRIC UTILITY INDUSTRY AFFECT CVPS's COST OF CAPITAL?

A. The electric utility industry has, as is well known, been through a period of turmoil associated with partial deregulation and restructuring. This period may not be fully behind us. Utility holding companies that embarked on electricity trading ventures or even those that own significant amounts of generation are particularly vulnerable to market fluctuations. However, utilities like CVPS that are still regulated and likely to remain so for the time being are relatively stable from an investor standpoint. CVPS can benefit by buying on the competitive wholesale electricity market without facing severe competition in its regulated retail market.

Q. IS CVPS VULNERABLE TO FLUCTUATIONS IN PURCHASED POWER COSTS?

A. CVPS is dependent on the power market for its supplies of electricity, but it obtains most of its power requirements under long-term contracts. According to Fitch, the rating agency, "Moderate commodity exposure is (CVPS's) primary credit risk…The commodity risk is primarily the result of having no fuel adjustment cost recovery mechanism." (CVPS response to AARP1-CVPS17)

Q. PLEASE COMMENT ON CVPS'S FINANCIAL SITUATION AND OUTLOOK.

A. CVPS stock has been performing quite well over the last several years. Its stock returned 24.3% in 2000, 44.8% in 2001, 15.4% in 2002, and 28.9% year to date in 2003. Such a performance is impressive compared to that of the general market and compared to the electric industry; over the last two years, the S&P index is slightly negative, while CVPS has enjoyed 40% growth.

V. CONCLUSIONS AND RECOMMENDATIONS

Q. IN DOLLAR TERMS, HOW LARGE IS YOUR ADJUSTMENT TO THE COMPANY'S COST OF SERVICE?

A. As noted earlier in my testimony, the adjustment of 100 basis points to the Company's cost of equity is approximately $1,870,000, or 85% of the revenue deficiency claimed by the Company for 2003.

Q. WHAT IS YOUR VIEW OF THE MEMORANDUM OF UNDERSTANDING IN LIGHT OF YOUR COST OF CAPITAL ANALYSIS?

A. The MOU includes an earnings cap of 10.5% return on equity for 2004. If the earnings cap were set at 10.0% return on common equity as opposed to the proposed 10.5%, the adjustment would be $935,000, one half of the above-mentioned amount. The proposed earnings cap is also retrospective in the sense that it modifies CVPS's existing earnings cap set at 11.0% for 2003 by adjusting it downwards to 10.75%. This is equivalent to retaining 11.0% for the first half of the year and introducing the new 10.5% cap for the second half of the year. Thirdly, the MOU retains the 10.5% cap for 2005. However, while the Company may not apply for a rate increase effective during 2004, it may do so effective January 1, 2005 if it deems it necessary to do so.

Q. HOW DOES THE PROPOSED CVPS EARNINGS CAP COMPARE WITH THE EARNINGS CAP PROPOSED FOR GMP?

A. The one identical feature is that the level of both caps is set at 10.5%. This is unfavorable to CVPS ratepayers because CVPS is a financially stronger company than GMP.

Q. IS YOUR ESTIMATE OF 10.0% COST OF EQUITY FOR CVPS CONSISTENT WITH THE 10.5% CONTAINED IN GMP'S PROPOSED MOU?

A. Yes. CVPS is likely to be perceived as significantly less risky than GMP. According to several measures of risk – beta, common equity ratio, interest coverage and capitalization – CVPS is less risky. (See Schedule 2) In their previous rate cases, CVPS was awarded an equity cost of 11.0% compared with GMP's 11.25%, a difference of 25 basis points. In my view, the current difference is approximately 50 basis points.

Q. IN WHAT RESPECTS DO THE TWO COMPANIES' EARNINGS CAPS DIFFER?

A. GMP's earnings cap replaces its earlier rate cap of 11.25%, i.e., it is fully retroactive to 2003. By contrast, CVPS's earnings cap for 2003 is set at the midpoint between it's old cap of 11.0% and the proposed new cap of 10.5%. In this sense, too, the CVPS proposal is unfavorable to ratepayers.

Q. HOW DO THE EARNINGS CAP PROVISIONS COMPARE WITH RESPECT TO FUTURE YEARS?

A. The GMP proposal is binding on the Company for three future years – 2004, 2005 and 2006. This gives ratepayers an assurance that the GMP will not retain earnings in excess of 10.5% during the entire three-year period (as well as

retrospectively during 2003). By contrast, the CVPS proposal is fully binding on the Company only in 2004. While it is nominally effective in 2005, the Company may within its discretion file for new rates effective during that year.

Q. WHAT, THEN, IS YOUR RECOMMENDATION TO THE BOARD?

A. Given that a lower cost of equity would virtually eliminate CVPS's claimed revenue deficiency for 2003, I am concerned that other aspects of revenue requirements have not received the attention that is due to them in what amounts to a rate case for 2003/2004. Note that longer-term rate stability is not assured by the agreement, which is only binding through the end of 2004. The Company has not made any showing that its power supply costs, which were found in part to be imprudently incurred in the past, are now prudent. Prudence should, in my opinion, be investigated before rates are set, as should other aspects of cost of service. I would recommend that the Board reject CVPS's MOU as currently proposed.

Q. DOES THAT COMPLETE YOUR TESTIMONY?

A. Yes, thank you.