ORIGINAL

DOCKET NO. 000108-GU - REQUEST FOR RATE INCREASE BY FLORIDA DIVISION OF CHESAPEAKE UTILITIES CORPORATION

WITNESS: DIRECT TESTIMONY OF DAVID J. DRAPER APPEARING ON BEHALF OF THE STAFF OF THE FLORIDA PUBLIC SERVICE COMMISSION

DATE FILED: AUGUST 28, 2000

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FPSC-RECORDS/REPORTING

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DIRECT TESTIMONY OF DAVID J. DRAPER

2 Q. Please state your name and business address.

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- A. My name is David J. Draper. My business address is 2540 Shumard Oak Boulevard, Tallahassee, Florida 32399-0865.
- 5 Q. By whom are you employed and in what capacity?
- A. I am employed by the Florida Public Service Commission, in the Finance and Tax Section of the Division of Economic Regulation, as a Regulatory Analyst III.
- 8 Q. Please outline your education qualifications and work experience.
- I graduated from Florida State University in 1994 with Bachelor of Science 9 degrees in Accounting and Finance. After graduation, I was employed full-time 10 at the Florida Department of Revenue where I reviewed and examined various tax 11 12 forms for accuracy and completeness. In addition, I corresponded with taxpayers and researched account information to ensure proper compliance with Florida 13 In 1995, I accepted an auditing position with the Florida Public 14 Service Commission in which I audited various regulated Florida utilities. In 15 1997. I took my present position with the Commission working in the Finance 16 17 Section analyzing return on equity, cost of capital and capital structures of public utilities regulated by the Commission. I am currently pursuing a Master 18 of Business Administration degree at Florida State University. 19
- 20 Q. Have you previously testified on cost of capital?
- A. No. I have, however, prepared and offered recommendations on cost of capital issues before this Commission.
- Q. What is the purpose of your testimony in this docket?
- A. The purpose of my testimony is to establish the appropriate cost of common equity for the Florida Division of the Chesapeake Utilities Corporation

- 1 (Chesapeake or Company) for use in determining an appropriate allowed rate of 2 return on equity.
- 3 Q. What principles provided the framework for your determination of a fair rate 4 of return?
- The principles established by the Supreme Court of the United States in 5 <u>Bluefield Water and Improvement Company v. Public Service Commission of West</u> 6 Virginia, 262 U.S. 679 (1923) and Federal Power Commission v. Hope Natural Gas 7 Company 320 U.S. 591 (1944), provided the primary legal basis for my analysis. 8 The Supreme Court held in both the Hope and Bluefield decisions that the return 10 to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks. The return, moreover, should be 11 sufficient to assure confidence in the financial integrity of the enterprise so 12
- Q. In addition to the principles established by the <u>Hope</u> and <u>Bluefield</u> decisions, what other conditions did you consider?

as to maintain credit and attract capital.

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- A. Based on my understanding of the <u>Hope</u> and <u>Bluefield</u> decisions, a regulated utility should be allowed to recover all costs prudently incurred in the provision of utility service, including an appropriate return on common equity capital. Recovery of all prudently incurred costs, including capital costs, effectively balances the interests of investors and ratepayers. Investors are provided with a return commensurate with returns on investments of comparable risk, while ratepayers pay the true cost for the service provided.
- Q. How does your analysis of a fair rate of return on Chesapeake's common equity meet these basic legal criteria?
- 25 A. My analysis of an appropriate rate of return on Chesapeake's common equity

capital is based upon an evaluation requirement for comparable risk common equity investments as determined through the direct application of capital market valuation models to current financial and economic data. In my opinion, a market-based equity pricing analysis satisfies the comparable returns, capital attraction, and financial integrity guidelines established by the <u>Hope</u> and <u>Bluefield</u> decisions for determining a fair and reasonable rate of return on common equity capital.

- 8 Q. What have you concluded is the cost of common equity capital for Chesapeake?
- 9 A. Based upon the results of my analysis, I conclude the current cost of common equity capital for Chesapeake is 11.3%.
- 11 Q. Please describe your general approach to determine the cost of common equity capital.
 - A. In order to properly evaluate the returns obtained through use of a market-based equity pricing analysis. I first examined general economic conditions, as well as industry and company factors, which drive capital market return requirements. I then applied two generally accepted market rate of return models to an index of comparable companies as a means to estimate the cost of common equity capital for Chesapeake.
 - Q. How do general economic conditions impact capital market return requirements?

 A. The interrelated factors of inflation and interest rates have a significant impact on investor return requirements. Increases in the general level of prices impact interest rates because investors are unwilling to commit their funds unless they are adequately protected against future losses in purchasing power. If investors anticipate a higher rate of inflation, they will adjust their return

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25 requirements upward to guard against the erosion of purchasing power.

Q. Please discuss the current economic environment and current expectations regarding inflation and interest rates.

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A. The annual inflation rate, as measured by the change in the Consumer Price Index (CPI), was 4.1% for the first quarter of 2000 and decreased to 3.6% by the second quarter. The August 1, 2000, issue of the Blue Chip Financial Forecasts projects the annual inflation rate will decrease to 2.8% by the third quarter of 2000. The drop in CPI is widely attributed to the Federal Reserve Board's action to control inflation. The Federal Reserve has taken actions that have increased the Federal Funds rate six times in the last 13 months in an effort to slow the economy and ward off inflation. The Federal Funds rate, currently at 6.27% for the second quarter, represents the rate banks charge on overnight loans to each other and depends on the amount of reserves in the banking system. Typically, the Federal Reserve targets the Federal Funds rate by increasing or decreasing reserves in the banking system, which, in turn, controls the supply of money. This is the most common way the Federal Reserve carries out monetary policy and is one tool used to control inflation. Although the national economy is still growing there are signs of a slowdown and economists generally believe that inflation is under control.

Q. What is your analysis of conditions in the natural gas local distribution company (LDC) industry?

A. The LDC industry faces risks and opportunities. Bypass of the LDC by large industrial customers and competition from alternative fuels continue to be significant risks. Flexible rate design mitigates these risks by allowing the LDC to retain industrial customers and compete with other fuels available to industrial customers. An additional concern is the effect of the industry

restructuring spurred by Order 636 of the Federal Energy Regulatory Commission Convergence of electric and gas companies within the industry is (FERC). happening quickly. According to Standard & Poor's Industry Surveys for Natural Gas Distribution, it is expected that in the next several years we will see a single industry that comprises fewer, larger, and more diversified companies competing to sell gas, electric, and other energy products and services to wholesale and retail customers alike. As competition within the energy market intensifies, the success of the new energy companies will be determined not only by the size of their customer base, but by the diversity of the products and services offered to their customers.

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- Please discuss the effect FERC Order 636 has had on natural gas local distribution companies.
- For interstate pipeline companies, Order 636 removed the obligation to provide a supply of gas to end of use customers and it required unbundling of pipeline rates for sales, transportation, and storage of gas. obligation, and the risks inherent in it, now resides with the LDCs, which must purchase supplies of gas from producers and reserve pipeline capacity to transport the gas. However, this risk carries less weight reduced because Order 636 does not represent a sudden change, but is instead the culmination of gradual changes by FERC. Pipelines have been unbundling rates and LDCs have been purchasing gas since FERC Order 436, which began open access, was issued in 1985. Also, the proceedings that resulted in Order 636 began in 1991. Order 636 became effective on November 1, 1993. LDCs adequately managed gas supplies during the record-setting cold winter that followed, which was a good test of how LDC's can 25 manage in the post-Order 636 environment. Still, one extreme winter does not

- constitute a complete test. I believe there remains some uncertainty regarding the effects of Order 636 on LDCs.
- Q. What opportunities exist for LDCs?

- A. Natural gas has a very high and growing market share in the U.S. energy market. It is a clean, efficient, competitively-priced fuel in ample supply. In addition, both the Clean Air Act Amendments passed in 1990 and the National Energy Policy Act of 1992 encouraged the use of natural gas. Many LDCs face attractive prospects for expanding their share in residential, commercial, and industrial markets as well as developing markets for fleet vehicles, residential and commercial gas cooling, and cogeneration.
- 11 Q. What potential risks does Chesapeake face?
 - A. In his testimony, Jeff Householder lists six primary business risk factors facing Chesapeake today. The first risk factor concerns the Company's ability to respond to the needs of its customers by providing the product and services they demand. Second, economic downturns in the primary industries served by the Company can have a significant impact on earnings. Third, if the Company is unable to grow its earning base by feasibly expanding into new service areas, rates will ultimately become non-competitive. The fourth risk is becoming too dependent on non-captive, cyclical, and in some cases, declining industrial accounts. The fifth risk is competition from alternate fuel providers, which pose an increasing risk to the Company's market share. Lastly, over the past two years, three gas pipeline companies have proposed major gas pipeline expansions targeted to large customers and electric power plants. Two of these planned projects extend across the Gulf of Mexico and come ashore around South Florida.

More than 90% of Chesapeake's thorough-put comes from large customers. 1 2 Many of these customers are located near the proposed pipeline projects. The greatest risk faced by Chesapeake is that these customers may bypass the Company 3 and connect directly to the pipeline. In addition, the Commission's recent 4 decision to allow all non-residential customers to choose their natural gas 5 supplier should raise competition between marketers and LDC's, in turn exerting 6 a downward pressure on natural gas prices (Docket No. 960725-GU, Order No. PSC-7 00-0630-F0F-GU). 8

What opportunities exist for Chesapeake?

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- Α. Access to a new pipeline may promote economic development and allow 10 Chesapeake to increase its customer base. Chesapeake's customer base is expected 11 to show reasonable growth in the coming years and the Company is expanding its 12 pipeline into new areas to capture a growing market of industrial and residential 13 14 customers.
- Q. What financial models did you use to determine the required return on common 15 equity for Chesapeake? 16
- To determine the required return on common equity for Chesapeake, I used a two-stage annually compounded discounted cash flow (DCF) model and a Capital Asset Pricing Model (CAPM). I applied these models to the common stocks of the companies in the <u>Value Line LDC</u> index. This procedure allowed me to determine the general cost of equity for natural gas LDCs. Relying on an index of comparable companies, instead of a single company, helps reduce forecasting errors and should provide more reliable information for use in measuring the cost Use of an index of companies mitigates the impact of abnormal 25 conditions that might be associated with one company. In addition, I applied the

- two-stage annually compounded DCF model to the common stocks of an index of electric companies.
- Q. Please describe the companies included in the <u>Value Line</u> LDC and electric indices.

A. The companies in the <u>Value Line</u> LDC Index are representative of the LDC industry. Companies whose gas operating revenues represented less than 80% of revenues in 1998 (according to C.A. Turner Utility Reports of Public Utilities), were removed from the index. Gas operating revenues as a percentage of the total revenues averaged 94% for group. Since Chesapeake had 100% of its revenues from gas sales in 1998, using an index with an average of 94% ensures the index is representative of Chesapeake's business risks. Being in the same industry, these companies face similar risks and are subject to similar economic and regulatory influences. I have listed the companies and their investment characteristics in Exhibit <u>DJD-1</u>. The investment risk characteristics for the index have an average <u>Value Line</u> safety ranking of 2, an average <u>Value Line</u> beta of 0.60, a range of bond ratings from "AA-" to "BBB-", and an average equity ratio of 53.3%.

The companies used in the comparable electric index, all had a <u>Value Line</u> beta of .60, paid dividends and each had projected dividends and earnings per share growth rates above zero. In addition, the index had an average S&P bond rating of "A." As with the natural gas index, I believe that this index of electric companies faces the same risks and opportunities, and are subjected to comparable economic and regulatory influences similar to Chesapeake. I have listed the index of electric companies and their investment characteristics in Exhibit DJD-1A.

25 Q. What is the theory behind a DCF model?

A. The DCF model is based on two principles. First, investors value an asset based on the future cash flows they expect to receive. Second, investors value a dollar today more than a dollar received in the future, meaning that they assume the time value of money. Therefore, in a DCF analysis, the cost of equity is the discount rate that equates the present value of expected cash flows associated with a share of stock to the present market price of the stock. In Exhibit <u>DJD-2</u>, I have provided the basic DCF equation and defined the terms. The basic model has three simplifying assumptions: 1) dividends are paid annually and grow at a constant rate; 2) the price of the stock is determined on the dividend payment date; and 3) dividends increase once a year starting one year from the dividend payment date.

Q. What DCF model have you used in your analysis?

A. I have used a two-stage annually compounded DCF model. An assumption behind the basic DCF model is that dividends grow at a constant rate. However, growth in dividends can vary from period to period. A two-stage DCF model, also known as a non-constant growth model, allows for two periods of dividend growth: a near term period during which dividends are specifically forecasted and a subsequent period of sustainable growth. In Exhibit <u>DJD-3</u>, I have presented the equation for my two-stage annually compounded DCF model and defined the terms. This model is consistent with the valuation practices of institutional investors and financial analysts. An additional advantage of the two-stage model is that it can use the specific dividend forecast from <u>Value Line</u>, and then use a sustainable growth rate. The two-stage model allows for more precision than the basic model.

25 Q. What are the inputs for your DCF model?

A. I used current stock prices for the companies in the <u>Value Line</u> index, specific dividend forecasts for the initial growth period, and a sustainable or long-term growth rate. For current stock prices, I first calculated the average of each company's high and low stock prices for July 2000. From these computations, I then calculated an average stock price for the index, which is the input to my model. I used <u>Value Line</u>'s forecasted dividends for the years 2001 and 2004. I assumed a constant growth rate between these years to estimate dividends for the initial growth period. I then calculated the long-term growth rate using the earnings retention method, also known as the b x r approach. The inputs for my earnings retention method are <u>Value Line</u>'s expected earned return on equity (r) and the expected retention rate (b) for 2004.

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Q. Have you included an allowance for issuance costs in your DCF model?

A. Yes. My DCF model includes an allowance for issuance cost, calculated as 3% of the stock price. An allowance for issuance cost enables the utility to recover the costs incurred when issuing common stock. Issuance costs include registration fees, legal fees, underwriter fees, and printing and mailing expenses. Investors could not earn the required return on their investment without an issuance cost adjustment. The sales price of the stock will exceed the net proceeds to the company because it will incur issuance costs. A company can incur these costs whether the stock is publicly traded or privately held. Conceptually, this situation with common stock is similar to that of bonds and preferred stock. With bonds, for example, the cost charged to ratepayers reflects issuance costs and is recovered over the life of the bond. The cost to the company for a specific bond issue is the interest expense plus the amortization of issuance costs divided by the principal value less the

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unamortized issuance costs. The result is that the cost to the utility is greater than the return to the creditor. Unlike bonds, common stock does not have a finite life. Therefore, issuance costs cannot be amortized and must be recovered by an upward adjustment to the allowed return on equity. This adjustment reflects the fact that, due to the issuance costs, the utility earns a return on an equity balance that is less than the actual amount paid by investors. Historically, utility underwriting expenses associated with issuing common stock have averaged 3 percent of gross proceeds.

- Q. What are the results of your DCF analysis?
- A. The results of my DCF analysis show that the cost of equity for the comparable natural gas index is 10.3% and 10.9% for the comparable electric index. Exhibits <u>DJD-4</u> and <u>DJD-4A</u> show the inputs and results of my analysis.
- 13 Q. What is the theory behind the CAPM?

A. The CAPM was first introduced by William Sharpe in 1964. It extended modern portfolio theory to introduce the notions of systematic and specific risk. CAPM divides the risk of holding risky assets into systematic and specific risk. Systematic risk is the risk of holding the market portfolio. As the market moves, each individual asset is more or less affected. To the extent that any asset is affected by such general market moves, that asset entails systematic risk. Systematic risk can be measured using beta, which is defined below.

Specific risk is the risk which is unique to an individual asset. It represents the component of an asset's volatility which is uncorrelated with general market moves. The expected excess return of an investment above the risk-free rate is just the investment's beta multiplied by the expected excess return on the broad market index. According to CAPM, the marketplace compensates

investors for taking systematic risk, but not for taking specific risk. This is because specific risk can be diversified away. When an investor holds the market portfolio, each individual asset in that portfolio entails specific risk, but through diversification, the investor's net exposure is just the systematic risk of the market portfolio. The theory underlying the CAPM is quite simple. 'The expected return on common equity depends on the beta of that company's equity. The beta is a measurement of stock price volatility relative to a broad market index. If a stock moves up or down twice as much as the market, it has a beta of 2. If it moves one half as much as the market, its beta is 0.5. The CAPM models the systemic risk in a particular asset. Systemic risk is associated with the movement of a market or market segment as opposed to distinct elements of risk associated with a specific security.

Q. Please describe your Capital Asset Pricing Model.

A. In Exhibit <u>DJD-5</u>, I have listed the equation and the components of the CAPM. There are three basis components to the CAPM: 1) the expected risk-free rate of return; 2) the stock's expected relevant market risk called "beta;" and 3) the expected return on the stock market taken as a whole. The risk-free rate ($R_{\rm F}$) is derived from the average projected yield of the 30-year Treasury bond. Treasury bonds are a recognized bench mark for risk-free rates, since there is little risk of the U.S. Government defaulting on its bonds. The required market return ($R_{\rm m}$) was determined by using <u>Value Line</u>'s database of listed companies and then screening those companies to remove anomalies. In my opinion, removing anomalies such as companies that don't pay dividends, having negative dividend growth, negative projected earnings growth or either growth greater than twenty-percent, is an accurate representation of the market return. The characteristics

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of companies used in the index required that dividends be paid to shareholders and have both projected dividend growth and projected earnings per share of less than twenty-percent, but greater than zero. For each of the screened companies, a basic DCF analysis was performed, then an average of all the DCF results were used as the required market return. In my opinion, the average beta for the Value Line LDC index is a reasonable proxy for the assumed beta for Chesapeake's Florida Division.

- Q. What is the cost of equity for the LDC index based on your CAPM analysis?
- 9 A. Based on my CAPM analysis, the cost of equity for the LDC index is 9.5%.
- 10 Exhibit $\underline{\text{DJD-5}}$ presents the results of my CAPM analysis and definitions.
- Q. Given the results of your DCF and CAPM analyses, what range did you determine as the cost of equity?
- A. Based on the results of my CAPM and DCF analyses, I have determined that the range for the cost of equity should be from 9.5% to 10.3%.
- 15 Q. Is this range of return appropriate for Chesapeake?

allowed a higher cost of equity.

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- A. No. While the range I calculated is an appropriate starting point,
 Chesapeake faces greater risks than the companies in the index and should be
- 19 Q. Why is Chesapeake's risks higher than the companies in the index?
- A. To determine Chesapeake's specific risk, I compared the average Net Plant and Net Income of the companies in the gas index to that of Chesapeake. Exhibit <u>DJD-1</u> shows that Chesapeake has significantly less net plant and net income than the companies in the index. As such, Chesapeake is less diverse with respect to its markets and may be more severely affected by economic changes. Studies suggest that smaller firms are generally riskier than larger firms and have higher costs

of equity. Small firms experience more business failures and have a less liquid market for their shares. In addition, Chesapeake is a regulated company in a very competitive and diverse energy service market. Chesapeake must compete with alternate fuel service providers, such as propane and fuel oil, in order to maintain and expand its customer base. Chesapeake must also compete with the electric companies in providing energy and services to new and existing customers.

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- Q. How did you adjust the cost of equity that you calculated to estimate the cost of equity for Chesapeake?
- As I noted earlier, the bond ratings for the companies in the <u>Value Line</u> comparable index of natural gas LDCs range from "AA" to "BBB" (See Exhibit DJD- $\underline{1}$). Using Standards & Poor's (S&P) system as an example, bonds in the top four categories of bond ratings, "AAA", "AA", "A", and "BBB", are considered investment grade and are eligible for bank investment under the regulations of the Controller of the Currency. In addition, laws of various states restrict investments by banks, insurance companies, pension funds and fiduciaries generally to investment grade bonds. Bonds rated "BB" or lower are considered speculative and may not have the ability to make timely interest and principal payments. As a public utility providing an essential service, and given efficient management and a sound regulatory environment (S&P considers Florida a supportive regulatory environment), Chesapeake's credit should be considered investment grade. I used the historic spread between the yields on "A" and "BBB" public utility bonds as a proxy for the higher return required for Chesapeake. The median and average of the companies in the <u>Value Line</u> index have a bond 25 | rating of single A ("A"). Therefore, I have used a "A" rating as a

representative bond rating for the index. The "BBB" rating is the lowest level of investment grade. By using the spread between "A" rating and a "BBB" rating, a proper adjustment for Chesapeake's smaller size should be ensured.

- 4 Q. How did you calculate the historic spread between "A" rated and "BBB" rated 5 public utility bonds?
 - A. I subtracted the yield on "A" rated public utility bonds from the yield on "BBB" rated public utility bonds as reported in Moody's Bond Survey for the last 120 months and averaged the results. Exhibit <u>DJD-6</u> presents the data and results. For June 2000, the spread between "A" and "BBB" public utility bonds over the past 120 months is 37 basis points.
- Q. What was the resulting cost of equity range for Chesapeake when adjusting for the bond yield differential?
- A. Adding the 37 basis points to my indicated range for the cost of equity resulted in a range from 9.9% to 10.7%.
 - Q. Does this range appropriately take into account the risk faced by Chesapeake? A. No. As I discussed earlier, the natural gas industry is under increasing competitive pressures from electric utilities. According to the S&P's Industry Survey, it is expected that within the next several years, we will see a single energy industry that comprises fewer, larger, and more diversified companies competing to sell gas, electric and other energy products and services to wholesale and retail customers alike. Since the start of the new year, six major mergers have occurred between electric and gas companies and eleven major mergers occurred in 1999. It will become increasingly difficult for a small LDC, like the Chesapeake Division, to compete with these larger energy providers in the coming years.

Q. How would you compensate for this risk?

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- A. In order to compensate for the risk of increased competition, I would add a premium for risk to the range of indicated model results.
- Q. How would you calculate this premium for competitive risk?
- A. I would add the point difference between the DCF results of the electric index and DCF results of the LDC index to the range of the model results indicated. The difference between the two DCF models is 65 basis points.
 - Q. What is the appropriate cost of equity for Chesapeake?
 - A. After adding the premium for competitive risk, I have determined that the appropriate range for the cost of equity for the Florida Division of Chesapeake Utilities Corporation, is from 10.6% to 11.3%. In my opinion, the top of the range should be used for the cost of equity for Chesapeake. Exhibit DJD-7 presents the range for Chesapeake. Determining the appropriate point estimate is a difficult but necessary decision in estimating the cost of equity and ultimately, it rests on judgment. Chesapeake has exposure to the remaining uncertainty surrounding FERC Order 636 similar to the companies in the index, but unlike those companies only one pipeline currently serves Chesapeake. discussed earlier, three large gas pipeline companies are proposing a second pipeline to serve South Florida. There are potential benefits to Chesapeake when the pipeline is built, but I believe there are greater risks in that existing customers may bypass and connect directly to the second pipeline. increased consolidation of electric and gas companies, competitive pressures will increase, causing financial margins to decrease for LDCs. In addition, the Commission's recent decision to allow small businesses to choose their natural gas supplier should raise competition between marketers and LDC's, in turn

exerting a downward pressure on natural gas prices. In my opinion, the top of the range for the cost of equity is reasonable and will compensate Chesapeake appropriately for the remaining uncertainty and risks that I have just discussed. Historically, the Florida Public Service Commission has allowed a range around the authorized cost of equity. Therefore, I recommend a return on common equity for Chesapeake of 11.3% for all regulatory purposes, with a range of plus or minus 100 basis points.

Chesapeake Utilities Corporation Index of Natural Gas Distribution

		1998 DATA C.A.		Value Line Data								
Company Name	S&P BOND RATING	TURNER UTILITIES REPORT % OF REV FROM GAS	Equity Ratio	Safety Rank	Beta	Net Income	Net Plant					
		76 OF REVIRONISAS				(000,)	(000,)					
1 AGL RESOURCES	BBB+	100%	40.0%	•	0.00	54.0	4500.0					
2 ATMOS ENERGY	. A-	89%	49.0%	2	0.60	51.8	1598.9					
3 CTG RESOURCES	A-	94%	51.0%	3	0.55	22.4	965.8					
4 CASCADE NATURAL GAS	BBB+		45.0%	2	0.50	17.2	341.2					
5 ENERGEN CORP.	А	100%	51.0%	3	0.55	16.87	282.3					
6 LACLEDE GAS	AA-	81%	51.0%	2	0.80	43.7	861.1					
7 NICOR INC.	AA- A+	100%	56.0%	1	0.55	27.4	519.4					
8 NEW JERSEY RESOURCES	= -	87%	70.0%	1	0.60	124.1	1735.2					
9 NORTHWEST NAT. GAS	A A	81%	59.5%	2	0.55	47.4	705.4					
10 PEOPLES ENERGY		100%	50.5%	2	0.60	49.9	895.9					
11 PIEDMONT NATURAL GAS	A+	98%	61.0%	1	0.70	90.2	1519.8					
12 PROVIDENCE ENERGY	A	100%	61.0%	2	0.60	64.5	1047.0					
	BBB+	98%	51.5%	3	0.55	8.4	218.2					
13 SOUTH JERSEY INDS.	BBB+	94%	48.5%	2	0.50	23.3	533.3					
14 SOUTHWEST GAS	BBB-	84%	36.5%	3	0.70	36.2	1581.1					
15 WASHINGTON GAS LIGHT	AA-	100%	58.0%	1	0.60	84.1	1402.7					
AVERAGE	Α-	94%	53.3%	2	0.60	47.16	947.2					
MEDIAN	A	98%	51.0%	2	0.60	43.70	895.9					
MIN	BBB-	81%	36.5%	1	0.50	8.40	218.2					
MAX	AA-	100%	70.0%	3	0.80	124.10	1735.2					
CHESAPEAKE UTILITIES CORF	. (FLORIDA DIV.) 100%	54.5%			1.2	19.6					

S&P Stock Guide: April 2000 March Stock Prices Value Line Issue: Ed. 3 - June 23, 2000 Value Line CD, Ver. 2.0 - July 2000 Blue Chip Financial Forecasts, July 1, 2000

Value Line Data

Chesapeake Utilities Corporation Index of Comparable Electric Utilities

	UTILITY NAME	S&P BOND RATING	Equity Ratio	Beta	Proj Dividend Growth Rate	Proj EPS Growth Rate
1	Allegheny Energy	A+	44.0%	0.60	2.00	9.50
	DTE Energy	A-	50.0%	0.60	0.50	5.50 5.50
	Energy East Corp.	Α	57.5%	0.60	5.00	10.00
4	FirstEnergy Corp.		43.5%	0.60	3.00	7.50
5	Kansas City Power & Lt.	Α	43.0%	0.60	1.00	7.50
	LG&E Energy Corp.	Α	43.5%	0.60	3.00	7.00
	Otter Tail Power	AA-	54.0%	0.60	3.00	6.50
	PPL Corp.	A-	30.0%	0.60	2.00	9.00
	Reliant Energy	BBB+	47.0%	0.60	2.00	11.50
10	TXU Corp.	BBB+	30.5%	0.60	4.00	5.00
	Average	Α	44.3%	0.60	2.55	7. 9 0

54.5%

Source:

Value Line CD, Ver. 2.0 - July 2000

CHESAPEAKE UTILITIES CORP. (FLORIDA DIV.)

Basic DCF Equation

$$P_0 = \frac{D_1}{(1+K)} + \frac{D_2}{(1+K)^2} + \frac{D_3}{(1+K)^3} + \dots + \frac{D_{\infty}}{(1+K)^{\infty}}$$

Where:

 D_t = Dividends paid at the end of period t.

K = Investor's required rate of return.

P_o = The current price of the stock.

This can also be written as,

$$P_0 = \sum_{t=1}^n \frac{D_T}{(1+k)^t}$$
 as "n" approaches ∞ .

Assuming constant growth in dividends and g<K, these equations reduce to,

$$K = \frac{D_1}{P_0} + g$$

where g is the constant growth rate in dividends.

TWO STAGE ANNUALLY COMPOUNDED DCF MODEL

$$P_o(1-FC) = \frac{D_1}{(1+K)} + \frac{D_2}{(1+K)^2} + \dots + \frac{D_n}{(1+K)^n} + \frac{D_n(1+g)}{K-g} + \frac{1}{(1+K)^n}$$

Where

Po = The current stack price.

 D_1 , D_2 , . . . D_n = Expected dividends each year.

FC = Flotation costs.

K = Investors required rate of return.

g = The constant growth rate after year n.

Chesapeake Utilities Corporation Index of Natural Gas Distribution

Discounted Cas Flow Model

						JU	LY	-					
	COMPANIX	D11/0	D0.44	D.11 (0			Ed. 3, 06/23/20		0544				
-	COMPANY	DIV0	DIV1	DIV2	DIV3	DIV4	EPS4	ROE4	GR1-4	GR4+	HI-PR	LO-PR	VER-PR
1	AGL RESOURCES	1.08	1.08	1,10	1.13	1.15	1.75	12.50	1.0212	1.0429	18.188	16.063	17.125
2	ATMOS ENERGY	1.14	1.18	1.23		1.35	2.40	14.50	1.0459	1.0634	20.625	17.750	19.188
3	CTG RESOURCES	1.04	1.08	1.12	1.16	1.20	2.45	12.50	1.0357	1.0638	37.688	36.000	
4	CASCADE NATURAL GAS	0.96	0.97	0.98	0.99	1.00	1.80	14.00	1.0102	1.0622	17.063	15.813	16.438
5	ENERGEN CORP.	0.67	0.70	0.73	0.77	0.80	2.00	11.50	1.0455	1.0690	24.500	21.000	22.750
6	LACLEDE GAS	1.36	1.40	1.43	1.47	1.50	2.50	14.00	1.0233	1.0560	20.125	19.188	19.656
7	NICOR INC.	1.62	1.70	1.79	1.89	2.00	4.00	18.00	1.0557	1.0900	35.500	32.125	33.813
8	NEW JERSEY RESOURCES	1.72	1.76	1.80	1.84	1.88	3.60	15.50	1.0222	1.0741	40.688	37.625	39.156
9	NORTHWEST NAT. GAS	1.24	1.25	1.27	1.28	1.30	2.30	11.00	1.0132	1.0478	24.000	21.625	22.813
10	PEOPLES ENERGY	2.00	2.04	2.08	2.11	2.15	3.60	12.00	1.0177	1.0483	33.500	31.250	32.375
11	PIEDMONT NATURAL GAS	1.44	1.50	1.55	1.61	1.67	2.80	12.50	1.0364	1.0504	29.125	26.875	28.000
12	PROVIDENCE ENERGY	1.08	1.08	1.19	1.31	1.45	2.10	10.50	1.1032	1.0325	42.250	40.750	41.500
13	SOUTH JERSEY INDS.	1.46	1.47	1.50	1.52	1.55	2.65	11.50	1.0178	1.0477	27.563	26.063	26.813
14	SOUTHWEST GAS	0.82	0.82	0.85	0.89	0.92	1.70	9.00	1.0391	1.0413	18.563	16.875	17.719
15	WASHINGTON GAS LIGHT	1.24	1.26	1.31	1.35	1.40	2.50	13.00	1.0357	1.0572	25.500	23.938	24.719
	AVERAGE	1.2580	1.2860	1.3290	1.3741	1.4213 1.5016	2.5433	12.8000	1.0349	1.0564			26.5938
					_ COST OF	EQUITY							
	25.79594				Annual	10.28%							
	25.79594 0.3119	0.3043	0.2968	0.2960	0.2888	0.2817	0.2748 0.2469	0.2771 0.2408	0.2703 0.2430	0.2637 0.2371	0.2572 0.2313	0.2594 0.2256	0.2531 20.7362
	25.79594 1.170225	1.089758	1.0214118	0.9577703	0.9064704	20.650308							

Source:

S&P STOCK GUIDE: August 2000 with July Stock Prices

Value Line Ed. - 3, June 23, 2000

Chesapeake Utilities Corporation Comparable Index of Electric Utilities Discounted Cas Flow Model

Exhibit DJD-4A (Page 1 of 1)

	00 D DO	ND									_	JUL	_Y	
COMPANY	S&P BO RATIN		DIV0	DIV1	DIV2	DIV3	DIV4	EPS4	ROE4	GR1-4	GR4+	HI-PR	LO-PR	AVER-PR
1 Allegheny Energy	A+		1.74	1.78	1.54	1.33	1.15	1.75	12.50	0.8645	1.0429	31.875	27.750	29.813
2 DTE Energy	A-		2.06	2.06	1.79	1.55	1.35	2.40	14.50	0.8686	1.0634	32.688	30.438	31.563
3 Energy East Corp.	Α		0.88	0.92	1.01	1,10	1.20	2.45	12.50	1.0926	1.0638	20.250	17.938	19.094
4 FirstEnergy Corp.			1.50	1.50	1.31	1.14	1.00	1.80	14.00	0.8736	1.0622	25.750	23,563	24.656
5 Kansas City Power & Li	t. A		1.66	1.66	1.30	1.02	0.80	2.00	11.50	0.7840	1.0690	26.125	23.563	24.844
6 LG&E Energy Corp.	Α		1.29	1.33	1.38	1.44	1.50	2.50	14.00	1.0409	1.0560	24.313	23.875	24.094
7 Otter Tail Power	AA-		1.02	1.05	1.30	1.61	2.00	4.00	18.00	1.2396	1.0900	22.500	20.750	21.625
8 PPL Corp.	A-		1.06	1.18	1.38	1.61	1.88	3.60	15.50	1.1680	1.0741	27.188	21.938	24.563
9 Reliant Energy	BBB+		1.50	1.50	1.43	1.36	1.30	2.30	11.00	0.9534	1.0478	34.000	29.063	31.531
10 TXU Corp.	BBB+		2.43	2.53	2.40	2.27	2.15	3.60	12.00	0.9472	1.0483	32.563	29.813	31.188
AVERAGE	A		1.5140	1.5510	1.4836	1.4445	1.4330 1.5215	2.6400	13.5500	0.9832	1.0618		,	26.2969
				_	COST OF I	QUITY								
25.50797					Annual	10.93%								
25.50974	0.	3752	0.3655	0.3561	0.3554	0.3463	0.3373	0.3286 0.2484	0.3063 0.2400	0.2984 0.2339	0.2907 0.2278	0.2832 0.2220	0.2686 20.2845	0.2617 0.2550
25.50797	1.	4028	1.2592	1.0937	0.9675	0.8904	19.8943							

Sources:

VALUE LINE CD - JULY 2000

S&P STOCK GUIDE: AUGUST 2000 WITH JULY STOCK PRICES

C. A. TURNER UTILITY REPORT

Chesapeake Utilities Corporation

Index of Natural Gas Distribution
CAPITAL ASSET PRICING MODEL

Exhibit DJD-5 (Page 1 of 1)

CAPITAL ASSET PRICING MODEL

CAPM = Rf + B * (Rm - Rf) = 6.02% + (.60 x (11.89% - 6.02%)) = 6.02% + 3.52% = 9.54%

Where:

Rf = Risk-Free Rate = 6.02%

Rm = Required Market Return = 11.89%

B = Average Beta of Gas Index = 0.60

INDEX OF COMPANIES	BETA										
1 AGL RESOURCES	0.60										
2 ATMOS ENERGY	0.55										
3 CTG RESOURCES	0.50										
4 CASCADE NATURAL GAS	0.55										
5 ENERGEN CORP.	0.80										
6 LACLEDE GAS	0.55										
7 NICOR INC.	0.60										
8 NEW JERSEY RESOURCES	0.55										
9 NORTHWEST NAT. GAS	0.60										
10 PEOPLES ENERGY	0.70										
11 PIEDMONT NATURAL GAS	0.60										
12 PROVIDENCE ENERGY	0.55										
13 SOUTH JERSEY INDS.	0.50										
14 SOUTHWEST GAS	0.70										
15 WASHINGTON GAS LIGHT	0.60										
AVERAGE 0.60											

SOURCE:

VALUE LINE ISSUE: Ed. 3, JUNE 23, 2000 Blue Chip Financial Forecasts, July 1, 2000

BOND YIELD DIFFERENTIALS

Public Utility Long Term Bond Yield Averages Source: Moody's Credit Perspectives 120 Month Average -

Long-Term Corporate Bond Yield Averages - Avg. Public Utility

Exhibit DJD-6 (Page 1 of 2)

		Long-Ter	m Corpoi	rate Bond fiel	a Averag	es - Avg. Publ	IC UTIRY	5 Ounty					EXHIBIT DODO (Fage 1 of 2)						
		0.0906		0.0906		0.0503		0.0503		0.0503		0.0933		0.0933		0.0933		0.0933	
Period	Aaa	SPREAD	Aa1	SPREAD	Aa2	SPREAD	Aa3	SPREAD	A1	SPREAD	A2	SPREAD	A3	SPREAD	Baa1	SPREAD	Baa2	SPREAD	Baa3
JUNE	7.96	0.07	8.03	0.07	8.10	0.09	8.19	0.09	8.27	0.09	8.36	0.04	8.40	0.04	8.43	0.04	8.47	0.04	8.51
MAY	8.22	0.11	8.33	0.11	8.44	0.09	8.53	0.09	8.61	0.09	8.70	0.05	8.75	0.05	8.81	0.05	8.86	0.05	8.91
APR MAR	7.95 7.87	0.11 0.06	8.08 7.93	0.11 0.06	8.17 7.99	0.06 0.10	8.23 8.09	0.06 0.10	8.29 8.18	0.06 0.10	8.35 8.28	0.02 0.04	8.37 8.32	0.02 0.04	8.38 8.36	0.02 0.04	8.40 8.40	0.02 0.04	8.42 8.44
FEB	7.82	0.09	7.91	0.09	7.99	0.10	8.08	0.10	8.16	0.10	8.25	0.03	8.28	0.03	8.30	0.03	8.33	0.03	8.36
JAN 2000	7.95	0.11	8.06	0.11	8.17	0.06	8.23	0.06	8.29	0.06	8.35	0.02	8.37	0.02	8.38	0.02	8.40	0.02	8.42
DEC	7.74	0.13	7.87	0.13	8.00	0.05	8.05	0.05	8.09	0.05	8.14	0.05	8.19	0.05	8.23	0.05	8.28	0.05	8.33
NOV	7,56	0.13	7.69	0.13	7.82	0.04	7.86	0.04	7.90	0.04	7.94	0.08	8.00	0.06	8.06 8.23	0.06 0.09	8.12 8.32	0.06 0.09	8.18 8.41
OCT SEP	7.73 7.55	0.11 0.14	7,85 7.69	0.11 0.14	7.96 7.82	0.03 0.04	7.99 7.86	0.03 0.04	8.03 7.89	0.03 0.04	8.06 7.93	0.09 0.09	8.15 8.02	0.09 0.09	8.10	0.09	8.19	0.09	8.28
AUG	7.54	0.14	7.68	0.14	7.82	0.03	7.85	0.03	7.88	0.03	7.91	0.08	7.99	0.08	8.08	0.08	8.16	80.0	8.24
JULY	7.34	0.14	7.48	0.14	7.62	0.03	7.65	0.03	7.68	0.03	7.71	0.09	7.80	0.09	7.88	0.09	7.97	0.09	6.06
JUNE	7.37	0.15	7.52	0.15	7.67	0.02	7.69	0.02	7.72	0.02	7.74	0.10	7.84	0.10	7,93	0.10	8.03	0.10	8.13 7.83
MAY APR	7.09 6.80	0.15 0.16	7.24 6.96	0.15 0.16	7.38 7.11	0.03 0.04	7.41 7.15	0.03 0.04	7.44 7.18	0.03 0.04	7.47 7.22	0.09 0.10	7.56 7.32	0.09 0.10	7.65 7.41	0.09 0.10	7.74 7.51	0.09 0.10	7.61
MAR	6.78	0.17	6.95	0.17	7.11	0.05	7.16	0.05	7.21	0.05	7.26	0.10	7.36	0.10	7,45	0.10	7.55	0.10	7.65
FEB	6.56	0.19	6.75	0.19	8.94	0.05	6.99	0.05	7.04	0.05	7.09	0.11	7,20	0.11	7.30	0.11	7.41	0.11	7.52
JAN 1999	5.41	0.21	6.62	0.21	6.82	0.05	6.87	0.05	6.92	0.05	6.97	0.11	7.08	0,11	7.19	0.11	7.30	0.11	7,41
DEC NOV	6.43 6.59	0,18 0,15	6.81 6.74	0.18 0.15	6.78 6,89	0.04 0.05	6.82 6.94	0.04 0.05	6.87 6.98	0.04 0.05	6.91 7.03	0.11 0.09	7.02 7.12	0.11 0.09	7.13 7.22	0,11 0,09	7.24 7.31	0.11 0.09	7.35 7.40
OCT	6.64	0.13	6.72	0.13	6.80	0.05	6,85	0.05	6.91	0.05	6.96	0.06	7.02	0.06	7.07	0.06	7.13	0.06	7.19
SEP	6.66	0.06	6.72	0.06	6.78	0.05	6.83	0.05	6.88	0.05	6.93	0.07	7.00	0,07	7.06	0.07	7.13	0.07	7.20
AUG	6.75	0.06	6.81	0.06	6.87	0.04	6.91	0.04	6.96	0.04	7.00	0.07	7.07	0.07	7.13	0.07	7.20	0.07	7.27
JULY	6.80	90.0	6.86	0.06	6.91	0.04	6.95	0.04	6.99	0.04	7.03	0.07	7.10 7.09	0.07 0.06	7.18 7.15	0.07 0.06	7.23 7.21	0.07 0.06	7.30 7.27
JUNE MAY	6.80 6.94	0.06 0.04	6.86 6.98	0.06 0.04	6.91 7.02	0.04 0.05	6.95 7.07	0.04 0.05	6.99 7.11	0.04 0.05	7.03 7.16	0.08 0.08	7.22	0.06	7.13	0.06	7.34	0.06	7.40
APR	6.94	0.04	6.98	0.04	7.02	0.05	7.07	0.05	7.11	0.05	7.16	0.07	7.23	0.07	7.30	0.07	7.37	0.07	7.44
MAR	6.96	0.04	7.00	0.04	7.04	0.04	7,08	0.04	7.12	0.04	7.16	0.07	7.23	0.07	7.30	0.07	7.37	0.07	7.44
FEB	6.91	0.04	6.95	0.04	6.99	0.04	7.03	0.04	7.08	0.04	7.12	0.08	7.20	0.08	7.28	0.08 0.08	7.36 7.28	0.08 0.08	7.44 7.36
JAN 1998 DEC	6.65 6.99	0.05 0.04	6,90 7.03	0.05 0.04	6.94 7.07	0.04 0.03	6.98 7.10	0.04 0.03	7.01 7.13	0.04	7.05 7.1 6	0.08 0.08	7.13 7.24	0.08 0.08	7.20 7.33	0.08	7.41	0.08	7.49
NOV	7.09	0.03	7.12	0.03	7.15	0.03	7.18	0.03	7.22	0.03	7.25	0.08	7.33	0.08	7.41	0.08	7.49	0.08	7.57
OCT	7.18	0.05	7.23	0.05	7.28	0.02	7.30	0.02	7.33	0.02	7.35	0.11	7.46	0.11	7.58	0.11	7.67	0.11	7.78
SEP	7.45	0.04	7.50	0.04	7.54	0.01	7.55	0.01	7.57	0.01	7.58	0.09	7.67	0.09	7.75	0.09	7.84 7.93	0.09 0,14	7.93 8.07
AUG JUL	7.39 7.29	0.04 0.07	7.43 7.36	0.04 0.07	7.46 7.43	0.02 0.02	7.48 7.45	0.02 0.02	7.49 7.46	0.02 0.02	7.51 7.48	0.14 0.13	7.65 7.61	0.14 0.13	7.79 7.74	0.14 0.13	7.87	0.13	8.00
JUN	7.55	0.06	7.62	0.06	7.68	0.01	7.69	0.01	7.71	0.01	7.72	0.13	7.85	0.13	7.99	0.13	8.12	0.13	8.25
MAY	7.72	0.06	7.79	0.06	7.85	0.01	7.86	0.01	7.88	0.01	7.89	0.13	8.02	0.13	8.15	0,13	8.28	0.13	8.41
APR	7.87	0.08	7,94	0.06	8.00	0.01	8.01	0.01	8.02	0.01	8.03	0.13	8.16	0.13	8.29	0.13	8.42	0.13	8,55
MAR FEB	7.70 7.47	0.07 0.08	7.77 7.54	0.07 0.06	7.84 7.60	0.01 0.01	7.85 7.61	0.01 0.01	7.86 7.63	0.01 0.01	7.87 7.64	0.13 0.13	8.00 7.77	0.13 0.13	8.13 7.89	0.13 0.13	8.26 8.02	0.13 0.13	8.39 8.15
JAN 1997	7.53	0.07	7.61	0.07	7.68	0.03	7.71	0.03	7.74	0.03	7.77	0.14	7.91	0.14	B.04	0.14	8.18	0.14	8.32
DEC	7.33	0.06	7.39	0.06	7.44	0.05	7.49	0.05	7.54	0.05	7.59	0.13	7.72	0.13	7.85	0.13	7.98	0.13	8.11
NOV	7.21	0.06	7.27	0.06	7.32	0.06	7.38	0.06	7.43	0.06	7.49	0.13	7.62	0.13	7.74	0.13	7.87	0.13	8.00
OCT SEPT	7.50 7.76	0.05 0.04	7.55 7. 8 0	0.05 0.04	7.60 7.84	0.06 0.06	7.66 7.90	0.06 0.06	7,71 7.95	0,06 0.06	7.77 8.01	0.13 0.13	7.90 8.14	0.13 0.13	8.02 8.28	0.13 0.13	8.15 8.41	0.13 0.13	8.28 8.54
AUG	7.59	0.04	7.63	0.04	7.68	0.06	7.72	0.06	7.78	0.06	7.84	0.14	7.98	0.14	8.11	0.14	8.25	0.14	8.39
JULY	7.78	0.02	7.81	0.02	7.83	0.06	7.89	0.06	7.96	0.06	8.02	0.14	8.16	0.14	8.30	0,14	8.44	0.14	8.58
JUNE	7.83	0.02	7.85	0.02	7.87	0.06	7.93	0.06	8.00	0.06	8.06	0.15	8.21	0.15	8.36	0.15	8.51	0.15	8.66
MAY APR	7.73 7.60	0,03 0.05	7.78 7.65	0.03 0.05	7.79 7.70	0.08 0.06	7.85 7.76	0.06 0.08	7.92 7.83	0.06 0.06	7.98 7.89	0.16 0.14	8,14 8.03	0.16 0.14	8.29 8.18	0.16 0.14	8.45 8.32	0.16 0.14	8.61 8.46
MAR	7.45	0.05	7.50	0.05	7.55	0.06	7.81	0.06	7.67	0.06	7.73	0.14	7.87	D.14	8.01	0.14	8.15	0.14	8.29
FE8	7.11	0.04	7.16	0.04	7.20	0.06	7.26	0.06	7.31	0.06	7.37	0.14	7.51	0.14	7.64	0.14	7.78	0.14	7.92
JAN 1996	6.92	0.05	6.97	0.05	7.02	0.07	7.09	0.07	7.15	0.07	7.22	0.14	7.36	0.14	7.50	0,14	7.64	0.14	7.78
DEC NOV	6.94 7.13	0.04 0.04	6.99 7.18	0.04 0.04	7.03 7.22	0.07 0.07	7.10 7.29	0.07 0.07	7.16 7.36	0.07 0.07	7.23 7.43	0.13 0.13	7.36 7.56	0.13 0.13	7.50 7.68	0.13 0.13	7.63 7.81	0.13 0.13	7.76 7.94
OCT	7.13	0.03	7.10	0.04	7.30	0.05	7.35	0.05	7.41	0.07	7.46	0.13	7.58	0.13	7.70	0.13	7.82	0.13	7.94
SEPT	7.42	0.03	7.45	0.03	7.48	0.05	7.53	0.05	7.57	0.05	7.62	0.12	7.74	0.12	7.86	0.12	7.98	0.12	8.10
AUG	7.66	0.02	7.69	0.02	7.71	0.04	7.75	0.04	7.79	0.04	7.83	0.14	7.97	0.14	8.10	0.14	8.24	0.14	8.38
JULY	7.51 7.39	0.04 0.05	7.56 7.44	0.04 0.05	7.60 7.49	0.03 0.04	7.63 7,53	0.03 0.04	7.67 7.56	0.03 0.04	7.70 7. 6 0	0.14 0.14	7.84 7.74	0.14 0.14	7.97 7.87	0.14 0.14	8.11 8.01	0.14 0.14	8.25 8.15
MAY	7.71	0.04	7.76	0.03	7.80	0.04	7.84	0.04	7.87	0.04	7.91	0.14	8.04	0.14 0.13	8.17	0.14	8.30	0.14	8.43
APR	8.08	0.04	8.13	0.04	8.17	0.03	8.20	0.03	8.24	0.03	8.27	0.13	8,40	0.13	8.54	0.13	8.67	0.13	8.80
MAR	8.18	0.05	8.24	0.05	8.29	0.03	8.32	0.03	8.34	0.03	8.37	0.13	8.50	0.13	8.63	0.13	8.76	0.13	8.89
FEB JAN 1995	8.33	0.06	8.39	0.06	8.45	0.02	8.47	0.02	8.50	0.02	8.52	0.14	8,66	0.14 0.14	8.79 9.01	0.14 0.14	8.93 9.15	0.14 0.14	9.07 9.29
DAIA 1992	8.53	0.07	8.60	0.07	8.66	0.02	8.68	0.02	8.71	0.02	8.73	0,14	8.87	0.14	9.01	0.14	9.15	0.14	9.29

BOND YIELD DIFFERENTIALS

Public Utility Long Term Bond Yield Averages Source: Moody's Credit Perspectives

120 Month Average -

Long-Term Corporate Bond Yield Averages - Avg. Public Utility

Exhibit DJD-6 (Page 2 of 2)

		COURTIN	m Corpor	ate court ite	u Averay	65 - MVG. FUD	ne ouncy												
		0.0906		0.0906		0.0503		0.0503		0.0503		0.0933		0.0933		0.0933		0.0933	
Period	Asa	SPREAD	Aa1	SPREAD	Aa2	SPREAD	Aa3	SPREAD	A1	SPREAD	A2	SPREAD	A3	SPREAD	Baa1	SPREAD	Baa2	SPREAD	Baa3
DEC	8.55	0.07	8.62	0.07	8.69	0.02	8.71	0.02	8.74	0.02	8.76	0.13	8.89	0.13	9.03	0.13	9.16	0.13	9.29
NOV	8.77	0.07	8.84	0.07	8.90	0.03	8.93	0.03	8.95	0.03	8.98	0.12	9.10	0.12	9.23	0.12	9.35	0.12	9.47
OCT	8.65	0.06	8.72	0.06	8.78	0.03	8.81	0.03	8.83	0,03	8.86	0.13	8.99	D.13	9.11	0.13	9.24	0.13	9.37
SEP	8.41	0.08	8.49	0.08	8.56	0.03	8.59	0.03	8.61	0.03	8.64	0.11	8.75	0.11	8.87	0.11	8.98	0.11	9.09
AUG	8.15	0.09	8.24	0.09	8.32	0.03	8.35	0.03	8.38	0.03	8.41	0.11	8.52	0.11	8.63	0.11	8.74	0.11	8.85
JUL	8.21	0.09	8,30	0.09	8.38	0.03	8.41	0.03	8. 44	0.03	8.47	0,11	8.58	0.11	8.69	0.11	9.80	0.11	8.91
JUN	8.07	0.07	8.14	0.07	8.21	0.03	8.24	0.03	8.28	0.03	8.31	0.11	8.42	0.11	8.53	0.11	8.64	0.11	8,75
MAY	8.11	0.07	8,18	0.07	8.24	0.03	8.27	0.03	8.30	0.03	8.33	0.09	8.42	0.09	8.52	0.09	8.61	0.09	8.70
APR	8.00	0.06	8.06	0.06	8.12	D.03	8,15	0.03	8.19	0.03	8.22	D.08	8.30	0.08	8.39	0.08	8.47	0.08	8.55
MAR	7.60	0.07	7.67	0.07	7.74	0.04	7.78	0.04	7.81	0.04	7.85	0.09	7.94	0.09	8.02	0.09	8.11	0.09	8.20
FEB	7.19	0.07	7.27	0.07	7.34	0.04	7.38	0.04	7.43	0.04	7.47	0.10	7.57	0.10	7.66	0.10 0.11	7.76 7.66	0.1Q 0.11	7.86
JAN 1994 DEC	7.05	0.06	7.12	0.06	7.18	0.05	7.23	0.05	7.28	0.05	7.33	0.11	7.44	0.11 0.13	7.55 7.60	0.13		0.13	7.77 7.86
NOV	7.06 7.06	0.06 0.06	7.12 7.12	0.06 0.06	7.18	0.05 0.04	7.23	0.05 0.04	7.29 7.26	0.05 0.04	7.34 7.30	0.13 0.13	7.47 7.43	0.13	7.56 7.56	0.13	7.73 7.69	0.13	7.82
OCT	6.75	0.07	6.82	0.00	7,17 6,89	0.04	7.21 6.94	0.04	6.98	0.05	7.03	0.13	7.43	0.13	7.19	0.13	7.27	0.13	7.35
SEP	6.76	0.07	6.83	0.07	6.89	0.05	6,94	0.05	6.99	0.05	7.03	0.00	7.14	0.10	7.25	0.10	7.35	0.10	7.45
AUG	6.94	0.06	7.01	0.06	7.07	0.06	7,13	0.06	7,19	0.06	7.25	0.11	7.36	0.10	7.48	0.11	7.59	0.11	7.70
JUL	7.25	0.06	7.32	0.06	7.38	0.05	7.43	0.05	7.49	0.05	7.54	0.13	7.67	0.13	7.80	0.13	7.93	0.13	8.06
JUN	7.37	0.09	7.46	0.09	7.54	0.07	7.61	0.07	7.68	0.07	7.75	0.10	7.85	0.10	7.95	0.10	8.05	0.10	8.15
MAY	7.44	0.10	7.54	0.10	7.64	0.07	7.71	0.07	7.79	0.07	7.88	0.11	7.97	0.11	8.07	0.11	8.18	0.11	8.29
APR	7.50	0.07	7.57	0.07	7.64	0.06	7.70	0.06	7.75	0.06	7.81	0.10	7.91	0.10	8.01	0.10	8.11	0.10	8.21
MAR	7.64	0.06	7.70	0.06	7.76	0.05	7.81	0.05	7.85	0.05	7.90	0.07	7.97	0.07	8.03	0.07	8.10	0.07	8.17
FEB	7.75	0.09	7.84	0.09	7.92	0.04	7.96	0.04	8.00	0.04	8.04	0.09	8.13	0.09	8.22	0.09	8.31	0.09	8,40
JAN 1993	7.94	0.10	8.04	0.10	8.14	0.04	8.18	0.04	8.23	0.04	8.27	0.10	8.37	0.10	8.47	0.10	8.57	0.10	8.67
DEC	8.01	0.16	8.17	0.16	8.32	0.04	8:36	0.04	8.39	0.04	8.43	0.09	8.52	0.09	8.60	0.09	8.69	0.09	8.78
NOV	8.11	0.20	8.31	0.20	8.51	0.04	8.55	0.04	8.59	0.04	8.63	0.08	8.71	0.08	8.78	0.08	8.86	80.0	8.94
OCT	8.06	0.18	8.24	0.18	8.42	0.04	8.46	0.04	8.50	0.04	8.54	0.07	8.61	0.07	8.69	0.07	8.76	0.07	8.83
SEP	8.04	0.12	8.16	0.12	8.28	0.04	8.32	0.04	8.38	0.04	8.40	0.05	8.45	0.05	8.49	0.05	8.54	0.05	8.59
AUG	8.04	0.13	8.17	0.13	8.30	0.05	8.35	0.05	8.39	0.05	8.44	0.05	8.49	0.05	8.53	0.05	8.58	0.05	8.63
JUL	8.12	0.17	8.29	0.17	8.45	0.04	8.49	0.04	8.53	0.04	8.57	0.04	8.61	0.04	8,65	0.04	8.69	0.04	8.73
JUN	8.26	0.19	8.45	0.19	8.63	0.05	8.68	0.05	8.73	0.05	9.78	0.04	8.82	0.04	8.86	0.04	6.90	0.04	8.94
MAY	8.32	0.18	8.51	0.18	8,69	0.06	8.75	0.06	8.81	0.06	8.87	0.05	8.92	0.05	8.96	0.05	9.01	0.05	9.06
APR	8.36	0.20	8.56	0.20	8.76	0.06	8.82	0.06	8.87	0.06	8.93	0.06	8.99	0.06	9.05	0.06	9.11	0.06	9.17
MAR	8.39	0.22	8.61	0.22	8.82	0.05	8.87	0.05	8.92	0.05	8.97	0.06	9.03	90.0	9.10	0.06	9.16	0.06	9.22
FEB	8.30	0.23	8.53	0.23	8.76	0.06	8.82	0.06	8.87	0.06	8.93	0.05	8.98	0.05	9.04	0.05	9.09	0.05	9.14
JAN 1992 DEC	8.22 8.38	0.21	8.43	0.21	8.83	0.07	8.70	0.07	8.77	0.07	8.84	0.05	8.89	0.05	8.93	0.05	8.98	0.05	9.03
NOV	8.52	0.17 .0.17	8.55 8.70	0.17 0.17	8.71 8.87	0.06 0.06	8.77 8.93	0,06 0.06	8.82 8.99	0.06 0.06	8.88	0.06 0.08	8.94	0.08 0.08	9.01	0.06 0.08	9.07	0.06	9.13
OCT	8.57	0.17	8.75	0.17	8.92	0.08	8.99	0.00	9.05	0.07	9.05 9.12	0.06	9.13 9.19	0.02	9.20 9.25	0.07	9.26 9.32	0.08 0.07	9.36 9.39
SEP	8.65	0.15	8.80	0.15	8.95	0.07	9.02	0.07	9.09	0.07	9.16	0.06	9.22	0.06	9.28	0.06	9.34	0.06	9.40
AUG	8.81	0.13	8.94	0.13	9.06	0.08	9.14	0.08	9.21	0.08	9.29	0.06	9.35	0.06	9.41	0.08	9.47	0.06	9.53
JUL	9.10	0.08	9.18	0.08	9.26	D.10	9.36	0.10	9.45	0.10	9.55	0.05	9.60	0.05	9.64	0.05	9.69	0.05	9.74
JUN	9.10	0.09	9.19	0.09	9.28	0.10	9.38	0.10	9.49	0.10	9.59	0.07	9.66	0.07	9.72	0.07	9.79	0.03	9.86
MAY	8.93	0.12	9.05	0.12.	9.16	0.09	9.25	0.09	9.35	0.09	9.44	0.07	9.51	0.07	9.57	0.07	9.64	0.07	9.71
APR	8.95	0.10	9.05	0.10	9.14	0.11	9.25	0.11	9.35	0.11	9,46	0.06	9.52	0.06	9.58	0.06	9.64	0.06	9.70
MAR	9.04	0.10	9.14	0.10	9.23	0.11	9.34	0.11	9.44	0.11	9.55	0.06	9.61	0.06	9.68	0.06	9.74	0.06	9.80
FEB	8.92	0.12	9.04	0.12	9.16	0.10	9.26	0.10	9.37	0.10	9.47	0.07	9.54	0.07	9.61	0.07	9.68	0.07	9.75
JAN 1991	9.17	0.11	9.28	0.11	9.39	0.11	9.50	0.11	9.60	0.11	9.71	80.0	9.79	0.08	9.88	80.0	9.96	0.08	10.04
DEC	9.18	0.12	9.30	0.12	9.42	0.10	9.52	0.10	9.63	0.10	9.73	0.08	9.81	80.0	9.88	0.08	9.96	0.08	10.04
NOV	9.43	0.08	9.51	80.0	9.59	0.10	9.69	0.10	9.80	0,10	9.90	0.07	9.97	0.07	10.05	0.07	10.12	0.07	10.19
OCT	9.66	0.05	9.72	0.05	9.77	0.09	9.86	0.09	9.96	0.09	10.05	0.08	10.13	0.08	10.20	80.0	10.28	80.0	10.36
SEP	9.73	0.07	9.80	0.07	9.87	0.08	9.95	0.08	10.04	0.08	10.12	0.07	10.19	0.07	10.25	0.07	10.32	0.07	10.39
AUG	9.54	0.12	9.66	0.12	9.78	0.05	9.83	0.05	9.87	0.05	9.92	0.07	9.99	0.07	10.05	0.07	10.12	0.07	10.19
JUL	9.36	0.13	9.49	0.13	9.61	0.05	9.66	0.05	9.70	0.05	9.75	0.06	9.81	0.06	9.86	0.06	9.92	0.06	9.98

RANGE FOR CHESAPEAKE GAS

Natural Gas Index:

Two-Stage DCF Results 10.3%

CAPM Results 9.5%

Electric Utility Index:

Two-Stage DCF Results 10.9%

Bond-Yield Adjustment: 0.37%

Risk Premium Adjustment 0.65%

Suggested Range: 10.6% to 11.3%

Suggested ROE Mid-Point 11.3%

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Request for rate increase by Florida Division of Chesapeake Utilities Corporation. DOCKET NO. 000108-GU FILED:

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing Direct Testimony of David E. Draper has been filed in the above referenced docket and a true and correct copy has been furnished by U. S. Mail this 28th day of August, 2000, to the following:

Florida Division of Chesapeake Utilities Corporation Thomas A. Geoffrey Post Office Box 960 Winter Haven, Florida 33882-0960

Wiggins & Villacorta, P.A. Wayne Schiefelbein, Esquire Post Office Drawer 1657 Tallahassee, Florida 32302

WM. COCHRAN KEATING, IV

Staff Counsel

FLORIDA PUBLIC SERVICE COMMISSION

2540 Shumard Oak Boulevard

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