BEFORE THE

PENNSYLVANIA PUBLIC UTILITY COMMISSION

Docket No. R-2010-2179522

Duquesne Light Company

DLC Statement No. 9

Direct Testimony of Richard J. Matchett

DIRECT TESTIMONY OF RICHARD J. MATCHETT

Q. Please state your full name and business address.

A. Richard J. Matchett, 411 Seventh Avenue, Pittsburgh, PA 15219.

Q. What is your position at Duquesne Light Company ("Duquesne Light" or "Company")?

A. I am the Tax Manager.

Q. How long have your worked at Duquesne Light?

A. I have been an employee of Duquesne Light since February of 2003.

Q. What are your current responsibilities?

A. I am in charge of the overall tax function for DQE Holdings, LLC ("DQE") and its subsidiaries, which include Duquesne Light. Duquesne Light Holdings, Inc. ("DLH") is the parent company of Duquesne. DQE is the parent of DLH.

Q. What are your qualifications, work experience and educational background?

A. I have included that information as Exhibit RJM-1 to my testimony.

Q. What is the purpose of your direct testimony regarding Duquesne Light's request for increased rates?

A. My purpose is to describe and explain Duquesne Light's tax expense and related tax information.

Q. Are you sponsoring any exhibits as part of your direct testimony?

A. Yes, I am. I am co-sponsoring Duquesne Light's Income Statement as it relates to taxes and the Balance Sheet as it relates to deferred and prepaid taxes. The specific schedule references are DLC Exhibit 2 (Future) and 3 (Historic) B-1, B-2, C-6, D-16 and D-18. I am sponsoring all the Data Filing Requirements and

Schedules concerning Taxes. Specifically, the exhibits I am sponsoring in this proceeding are:

Item #	Subject Matter
DFR II-D-14	Debt Interest for Income Tax Calculation
DFR II-D-15	Schedule of Taxes Other than Income
DFR II-D-16	Schedule of Current and Deferred Tax Expense
DFR II-D-17	Schedule of Income Tax Refunds
DFR II-D-18	Prepaid and Deferred Income Tax Charges
DFR II-D-19	Federal Corporate Graduated Income Tax Rates
DFR II-D-20	Cost of Removal
DFR II-D-21	Income Tax Gain/Loss Carryovers
DFR II-D-22	Elim of Tax Savings by Payment of Interest on CWIP
DFR II-D-23	Consol. Tax Return Election - §1552
DFR II-D-24	Deferred Taxes Related to Depreciation
DFR II-D-25	Deferred Investment Tax Credits

Q. Please explain how these exhibits were prepared?

A. All were prepared either by me or under my direction or supervision. They were prepared in accordance with Commission requirements and Internal Revenue Service procedure and guidance.

Q. Could you explain Duquesne Light's tax expense for the historic test year?

A. For the historic tax year the Company has used its March 31, 2010 financial statement tax provision information to calculate its current and deferred income tax expense.

Q. Could you explain Duquesne Light's tax expense for the future test year?

A. In DLC Exhibit 2 (Future) D-18 the Company used the March 31, 2011 budgeted income and expenses to calculate the current federal and state income tax

expense. This exhibit also shows a calculation of federal deferred income tax expense.

Q. Would you explain the treatment of cost of removal in the income tax calculation?

A. In determining the pro forma operating expenses for the cost of service, the customer is charged with removal costs of retired plant through the net negative salvage adjustment. That adjustment is also used in the calculation of pro forma income taxes for the cost of service. The overall effect is, to the extent the customer is required to bear the cost of removal through the net negative salvage adjustment, he/she is also entitled to receive the benefit of any reduction of income taxes which results from including this adjustment in the pro forma income tax calculation.

Q. How does Duquesne Light file its federal tax returns?

A. Duquesne Light is part of a consolidated federal income tax filing with its parent DLH and DLH's parent DQE.

Q. Are you aware of the Pennsylvania Public Utility Commission's ("Commission") procedure to reflect a share of the losses by entities included in a consolidated income tax return?

A. Yes, I am.

Q. Have some of the companies that join in a consolidated return with Duquesne Light experienced such losses?

A. Yes.

Q. Have you made a calculation of the consolidated tax savings adjustment for this proceeding?

A. Yes, I have.

Q. Please describe your calculation?

A. I used the tax losses for 2008 and the estimated losses for 2009 and for each year allocated losses to Duquesne Light based on the ratio of the taxable income of Duquesne Light to all of the companies in the consolidated group that had taxable income in each year. I have calculated the reduction of Duquesne Light's current federal taxes to provide a share of tax reductions created by these companies' losses on the consolidated tax return in accordance with the procedure employed by the Commission. My calculations use data from 2008 and 2009, as it is most representative of the future operations of the company. This data was also adjusted to reflect the current corporate structure of DQE. The losses of DQE for 2008 and 2009 have been adjusted to eliminate the interest deduction on the promissory notes due to a significant modification that will result in the promissory notes being treated as a "disqualified debt instruments" under Section 163(l) of the Internal Revenue Code of 1986, thus causing the interest expense incurred to be nondeductible for U.S. income tax purposes for Tax Years after 2009. The losses of DLH for 2008 and 2009 have been adjusted downward to reflect capital structure changes at Duquesne Light. Specifically, the issuance of intercompany notes from Duquesne Light to DLH in the future test year to create a typical capital structure at Duquesne Light will create interest income to DLH that will offset a substantial portion of the DLH loss. Also, companies no longer in business have been eliminated from the 2008 and 2009 calculations. Based on my calculations the total consolidated tax savings adjustment to be allocated to the Company for the test year is approximately $1.0 million. The calculation of this adjustment is attached as Exhibit RJM – 2.

Q. Has the amount calculated above been used in the pro forma income tax calculations?

A. No it has not. This is the amount allocated to Duquesne Light as a whole. It must be reduced to assign a portion of the loss to the FERC regulated transmission business. This is done at Exhibit No._(LAC-2). The amount used in the pro forma income tax calculation is $782,000. This is the amount that has been

allocated to the Company's distribution assets for purposes of this distribution rate filing.

Q. Does the Company utilize accelerated tax depreciation?

A. Yes, the company uses accelerated depreciation. From 1971 to 1980 the Company elected to calculate tax depreciation under the provisions of the Class Life System (ADR) as provided by the Revenue Act of 1971. From 1981 to 1986 the Company elected to calculate tax depreciation under the Accelerated Cost Recovery System (ACRS) as provided by the Economic Recovery Tax Act of 1981. From 1987 to the present the Company has elected to calculate tax depreciation under the provisions of the Modified Accelerated Cost Recovery System (MACRS) as originally provided by the Tax Reform Act of 1986 and as modified in subsequent Acts.

Q. Please comment on the Deferred Income Taxes presented in your tax expense.

A. In this rate case, Duquesne Light is reflecting deferred income taxes resulting from the adherence to IRS normalization rules and use of accelerated federal tax depreciation associated with Post -1969 Public Utility Property under the following depreciation methods: General Depreciation Rules (1970-1980), CLADR(1971-1980), ACRS(1981-1986), MACRS(1987-Present).

Duquesne Light's continued entitlement to the use of accelerated depreciation provision on Post -1969 Public Utility Property for federal income tax purposes is dependent upon the use of a normalization method of accounting for the resulting deferred income tax activity in determining cost of service (and total accumulated deferred tax balance used in rate base) for rate making.

The company computes the deferred income taxes used in the cost of service calculation based on the applicable IRS normalization regulations which are primarily based on the original in-service date of the underlying asset. Duquesne

Light follows guidance within former IRC Section 167(1) and IRC Section 168(i)(9) in which depreciation timing differences of federal accelerated tax depreciation in excess of the straight line depreciation using the method for calculating the ratemaking depreciation is tax effected at the current federal tax rate. When the underlying depreciation timing differences reverse – any excess portion of the reserve for deferred income taxes is reversed ratably utilizing an ARAM Rate (Average Rate Assumption Method – TRA 1986 Section 203(e)).

Absent normalization accounting for ratemaking purposes, Duquesne Light would be required to use a straight-line method with book lives in determining its depreciation allowance for federal income tax purposes. In accordance with commission policy, deferred income taxes related to pre-1970 Public Utility Property and state income taxes are not included in the income tax provisions for this filing.

Q. Could you explain how you have accounted for deferred taxes in this filing?

A. Federal accumulated deferred income taxes ("ADIT") related to plant in service, recorded in account 282 have been deducted from rate base. These amounts have been reduced by the ADIT related to the prepayments on income taxes related to contributions-in-aid of construction. In addition, consistent with my understanding of Commission practices there are no ADIT for state income taxes on property. This reflects the flow-through treatment for those accelerated depreciation amounts adopted by the Commission.

Q Are there any investment tax credits the Company has reflected in the income tax calculations for this rate filing?

A. No, as shown in Attachment II-D-25, all unamortized investment tax credit will be completely amortized by December 2010. As a result, there is not a claimed reduction to pro forma income taxes for the future test year.

Q. How does the Company handle local and gross receipts taxes?

A. The Utility Gross Receipts Tax ("UGRT") return is filed on an annual basis. The UGRT is a percentage of the taxable gross receipts of the Company. Upon filing of the annual return an estimated payment is made that will cover approximately 90% of the future year's tax. Other local taxes are filed on an annual basis. Estimated amounts of the tax due are paid on a quarterly basis.

Q Does this conclude your direct testimony?

A. Yes, it does.

Exhibit RJM-1

Qualifications and experience of Richard J. Matchett.

Name: Richard J. Matchett

Title: Tax Manager

Duquesne Light Company Responsibilities:

February 2003-Present
Administration of corporate wide tax function. Responsibilities include Federal and state tax planning and research regarding acquisitions, dispositions, business combinations and continuing operations. Oversee tax compliance function for income, franchise, sales and use, property and utility-based taxes. Manage Federal and state tax examinations. Presentation of all financial statement tax related information. Compliance with Section 404 of the Sarbanes-Oxely Act.

Past Job Experience:

April 2002-January 2003
Self Employed Tax Consultant
Provided general tax accounting services to Duquesne Light Company.

September 1989-March 2002

General Nutrition Companies, Inc. -Tax Director / Manager of Tax Compliance

September 1987-August 1989
General Nutrition Companies, Inc. – Senior Tax Specialist

February 1981-August 1987
National Intergroup, Inc. – Senior Tax Accountant

May 1977-January 1981
Various Local CPA Firms – Staff Accountant

Education:

Robert Morris University, M.S. Business, 1986
Robert Morris University, B.S. Accounting, 1977
Certified Public Accountant

Exhibit RJM - 2

Consolidated Tax Savings Adjustment

(000's)

Company	Taxable Income	Taxable Income Companies	Tax Losses
2008:			
DQE HOLDINGS, LLC	(3,799)		(3,799)
DUQUESNE LIGHT HOLDINGS, INC.	20,838	20,838	
DQE ENTERPRISES, INC.	42	42	
DES CORPORATE SERVICES, INC.	(638)		(638)
DUQUESNE LIGHT COMPANY	74,842	74,842	
DES OPERATING SERVICES, INC.	-	-	
DIEMEN-FLEVO COMPANY (DUQUESNE FIBER)	712	712	
DQE CAPITAL CORPORATION	961	961	
MONONGAHELA LIGHT AND POWER	828	828	
DQE SYSTEMS, INC.	7,594	7,594	
DES SYNFUELS OPERATING SERVICES, INC.	-	-	
ALLEGHENY DEV. CORP	-	-	
TOTAL TAXABLE INCOME	101,380	105,817	(4,437)
ALLOCATION PERCENTAGE		71%	
LOSS ALLOCATED			(3,138)
TAX EFFECTED LOSS ALLOCATION			(1,098)
2009:			
DQE HOLDINGS, LLC	(2,956)	-	(2,956)
DUQUESNE LIGHT HOLDINGS, INC.	4,758	4,758	
DQE ENTERPRISES, INC.	21	21	
DES CORPORATE SERVICES, INC.	(214)		(214)
DUQUESNE LIGHT COMPANY	79,997	79,997	
DES OPERATING SERVICES, INC.	-	-	
DIEMEN-FLEVO COMPANY (DUQUESNE FIBER)	1,555	1,555	
DQE CAPITAL CORPORATION	(20)	-	(20)
MONONGAHELA LIGHT AND POWER	639	639	
DQE SYSTEMS, INC.	9,204	9,204	
DES SYNFUELS OPERATING SERVICES, INC.	5	5	
ALLEGHENY DEV. CORP	22	22	
TOTAL TAXABLE INCOME	93,011	96,201	(3,190)
ALLOCATION PERCENTAGE		83%	
LOSS ALLOCATED			(2,653)
TAX EFFECTED LOSS ALLOCATION			(928)
CONSOLIDATED TAX SAVINGS - Total Transmission & Distribution		(1,013)	
CONSOLIDATED TAX SAVINGS - Distribution Only		(782)	

BEFORE THE

PENNSYLVANIA PUBLIC UTILITY COMMISSION

Docket No. R-2010-2179522

Duquesne Light Company

DLC Statement No. 10

Direct Testimony of Michele R. Sandoe

Direct Testimony of Michele R. Sandoe

Q. Please state your full name and business address.

A. Michele R. Sandoe, 411 Seventh Avenue MD 8-6, Pittsburgh PA 15219.

Q. What is your position at Duquesne Light Company ("Duquesne Light" or "Company")?

A. Director of Customer Care.

Q. How long have you worked at Duquesne?

A. I began my employment with Duquesne Light on December 30, 1996.

Q. What are your current responsibilities?

A. My overall responsibilities are to develop and establish policies, plans, programs, strategies and tactics for providing customer service to the Company's 588,000 customers. Customer Care establishes and maintains the relationship between the customer and the Company. As such, I am responsible for the call center, commercial and industrial account management, energy efficiency and demand response programs, media relations, community outreach efforts, and universal services programs. I develop, implement, monitor and meet organizational objectives for Customer Care.

The following departments report to me as Director of Customer Care: Residential Customers, Commercial & Industrial Customers, Customer Relations, and Energy Efficiency Conservation and Demand Response.

Q. What are your qualifications, work experience and educational background?

A. I have included that information as Exhibit MRS - 1 to my testimony.

Q. What is the purpose of your direct testimony regarding Duquesne Light's request for increased rates?

A. I will describe and explain the company's operating history regarding the funding and implementation of Universal Service and Energy Conservation programs. I will also describe and explain our budget and future planned operations for these programs. In particular, I will discuss the company's Customer Assistance Program (CAP), Smart Comfort program (Duquesne Light's low-income usage reduction program), Dollar Energy program including Duquesne's Hardship Fund, and CARES program, as well as Duquesne Light's outreach efforts for LIHEAP and CRISIS grants.

Q. Are you sponsoring any exhibits as part of your direct testimony?

A. Yes, I am. Exhibit MRS – 1 is my biographical information. Exhibit MRS – 2 is Duquesne Light's Universal Services brochure.

Q. Can you explain the programs that Duquesne Light offers to assist low income customers?

A. Yes. Duquesne Light offers the following programs to assist payment troubled verified low-income customers: Customer Assistance Program (CAP), CARES, a hardship fund, Smart Comfort, and LIHEAP / CRISIS outreach.

CAP is a special payment program for low-income households (i.e., at or below 150% of the Federal poverty level for non-senior households; at or below 200% for senior citizens (aged 62 or above)) that have overdue balances or an inability to pay their electric bill. These Universal Service Program costs are included in the Company's operating expenses, currently funded by distribution revenues and administered by community-based organizations.

The primary features of CAP include a reduced payment agreement based on a customer's ability to pay, arrearage forgiveness over a specified period of time, protection against loss of electric service, and referrals to other community programs and services. A major benefit to customers who faithfully meet their monthly CAP payment agreement is the complete forgiveness of their existing indebtedness for electric service to Duquesne Light. As customers make "in-full", on-time payments in CAP, $1/36^{th}$ of their arrearage is forgiven each month.

An additional benefit is the CAP reduced payment. Customers who are enrolled in the program are allowed to pay a reduced monthly amount, based on the amount of their total household income. The present schedule of payments is as follows:

Income Category:	Residential Service Percentage of Budget Bill Payment:	Residential Electric Heat Percentage of Budget Bill Payment:
0% to 50% of Poverty	30%	45%
51% to 100% of Poverty	60%	65%
101% to 150% of Poverty (Up to 200% for seniors)	85%	80%

For the CAP Program, there were 27,566 customers participating in CAP by year end 2007, 30,799 CAP customers by year end 2008 and 33,291 CAP customers by year end 2009. In 2007, CAP customers benefited by over $2.28 million in arrearage forgiveness and $8.12 million in deficiency adjustments. In 2008, CAP customers benefited by nearly $2.13 million in arrearage forgiveness and over $10.2 million in deficiency adjustments. In 2009, CAP customers benefited by nearly $2.28 million in arrearage forgiveness and over $11.6 million in deficiency adjustments.

Q. Within your last response, you stated "The present schedule of payments is as follows". Is there a new or proposed schedule of payments anticipated?

A. Yes. On February 25, 2010, Duquesne Light submitted our Universal Service and Conservation Plan for years 2011 through 2013. Duquesne Light has taken a proactive approach on outreach efforts to our low-income, payment troubled customers. In the proposed plan, the Company has created a new payment schedule category for Duquesne Light's LIHEAP recipients that essentially "auto-

enrolls" the customer in our Customer Assistance Program. The modified CAP schedule of payments in the proposed plan is as follows:

Income Category:	Residential Service Percentage of Budget Bill Payment:	Residential Electric Heat Percentage of Budget Bill Payment:
0% to 50% of Poverty	30%	45%
51% to 100% of Poverty	60%	65%
101% to 150% of Poverty (Up to 200% for seniors)	85%	80%
LIHEAP Recipient	100%	100%

The automatic enrollment will occur upon receipt of a LIHEAP grant for a customer. In response an outreach letter will be generated that describes the Customer Assistance Program, the criteria necessary to participate (i.e. – overdue balance, Smart Comfort visit, suppliers of least cost) and a request to provide the household residency and income information. The customer will be temporarily enrolled in the LIHEAP Recipient Category and will be required to pay the Budget amount of the bill up until the time that the residency / income information is validated but not to exceed 6 months from the time the outreach letter was sent. While the income information is being confirmed, the outstanding balance will be "frozen" and with each successful, on time Budget payment, 1/36 of their arrearage will be set aside as the CAP arrearage write off. As soon as the customer fulfills the above criteria, the customer will be placed in the proper income category based on the federal poverty guidelines and will receive the reduced percentage of budget bill payment associated with that category. If however the customer fails to provide the requested information in the allotted time frame or has not met the additional criteria requirements, the customer will be removed from CAP.

The changes described above to the CAP enrollment process will significantly increase CAP participation levels in future years.

Q. Please describe the CARES Program.

A. The purpose of Duquesne Light's CARES Program is to assist payment challenged customers and customers with special needs obtain necessary social service support and assistance. The program is designed for customers whose income is less than 150% of the federal poverty guideline and senior citizens less than 200% of the federal poverty guideline, although no needy customer will be turned away. An outreach or community agency, such as Goodwill Industries or Holy Family, acts as an intermediary between the customer and Duquesne Light in an effort to link the customer to the necessary social service programs that will enhance the customer's ability to pay for electric service. The outreach workers contact referred customers and, if necessary, makes a home visit to the customer. Referrals are made by Duquesne Light, other utilities, community based agencies, the Pa. PUC, and word of mouth.

The primary objectives of CARES are to help customers experiencing payment hardships to manage their electric bills by providing them with information, resources, and encouragement, to make tailored referrals to Company and community assistance programs, to maintain and/or establish partnerships and alliances with social service agencies, government offices, and community organizations to ensure maximum and timely assistance for customers who have personal or family hardships and to act as an internal advocate for payment troubled customers.

Q. Please describe the Dollar Energy Fund.

A. Duquesne Light's hardship fund is a partnership with Dollar Energy Fund. Duquesne's stockholders match customer contributions up to $375,000 annually. In addition, the Company contributes up to $75,000 for administrative support. The program targets low-income customers who have overdue balances and an inability to pay the full amount of their energy bills. Dollar Energy defines low-income as households that have annual incomes at or below 200% of the federal poverty guideline. This program becomes the "fund of last resort" when other energy assistance programs are not available to the customer.

The primary features of Dollar Energy include direct financial assistance for overdue energy bills, protection against shutoffs, and referrals to other programs and services. As a result of ongoing donations from customers, Duquesne Light, in turn, disburses the funding weekly to Dollar Energy Fund. Duquesne Light's funding may be used to pay the electricity bill for residential or residential heating service.

Q. What is Duquesne Light's Smart Comfort Program?

A. Smart Comfort is Duquesne Light's low-income usage reduction program (LIURP). It targets residential customers whose gross household income is less than 150% of the federal poverty guideline and senior citizens whose gross household income is less than 200% of the federal poverty guideline, whose base load electric usage exceeds 500 kWh per month and who have been a resident at their current address for at least six months. However, all electric heat customers who are homeowners will have the base load usage and residency requirements waived. The residency requirement will also be waived for residential service CAP customers who are homeowners.

This program has evolved from strictly weatherization to an "end use" strategy. Electric usage reduction measures include cost effective appliance and lighting replacements in addition to determining if weatherization is warranted.

Low-income customers, whose base load usage is less than 500 kWh per month, are invited to take part in energy conservation workshops. These workshops provide conservation education, energy reduction tips, and usage reduction measures that they can install themselves. These workshops are held in different locations in Duquesne Light's service territory.

The primary objectives of Smart Comfort are to reduce energy usage and electric bills, to increase the ability to pay and to provide safer living conditions for low-income customers through the reduction of secondary heating devices. In addition, Smart Comfort seeks to make tailored referrals to Duquesne Light and other assistance programs such as CAP, Dollar Energy Fund or private funds, LIHEAP, and other weatherization programs.

The Smart Comfort process begins with an energy audit by an energy manager at the customer's home. Potential energy savings areas with the house are investigated and usage of targeted electrical equipment within the house is measured. Energy education is provided to the household. The Smart Comfort energy manager determines which measures are appropriate. Standard measures include compact fluorescent light bulbs, water mattress replacement with standard mattress, refrigerators and freezers, electric hot water tanks or tank wraps, window air-conditioning units, air filtration measures, and home insulation. At the discretion of the energy manager, potential measures include furnaces, electric dryers, electric stoves, water pumps, electric blankets, and central air conditioners. Finally, the energy managers will contact Smart Comfort recipients to discuss their usage and resulting decrease in energy consumption and to reinforce energy education.

In years 2009 and again in 2010, Duquesne Light targeted total-electric, multi-family units with our weatherization efforts and the results were positive. Customers, who received weatherization, were estimated to receive on average a 35% reduction in electric consumption compared to that of previous years. During 2011-2013, we will continue to focus our efforts on multi-unit dwellings including electric heat, electric water heating, and base load dwellings. The apartment dwellings must be individually metered.

Q. Does Duquesne Light provide any other functions to provide customer support?

A. Yes, we do. Aside from the other programs that Duquesne Light administers, the Company promotes LIHEAP and CRISIS programs through informational/educational brochures, bill print messages, Duquesne Light's web site, bill stuffers, and seminars. Duquesne Light mails thousands of LIHEAP applications to new potential LIHEAP recipients each year. Duquesne Light also provides an internal liaison who facilitates the screening and grant distribution process.

See Exhibit MRS-2 for the Universal Services brochure.

Q. How have these programs been funded over the past years?

A. Universal Services programs have been funded over the past decade or more by Company revenues, except for shareholder funding as described above. LIHEAP and CRISIS grants are not funded by Company revenues.

Q. Has Duquesne Light done anything to promote the availability of these programs?

A. Yes. Duquesne Light promotes these programs by distributing Universal Services brochures, maintaining information concerning Universal Services on Duquesne Light's website, providing informational factoids on the Interactive Voice Response phone system (IVR), and mailing informational bill "stuffers" to residential customers. The Universal Services toll-free number is located on all residential bills. Further, Duquesne Light's Customer Service Representatives provide information and individual referrals to all customers who potentially qualify for Universal Services. During the Cold Weather Intervention Program (CWIP) survey, information concerning Universal Services Programs is provided and promoted.

In addition, during the heating season, representatives, with the cooperation of multiunit building mangers, visit total electric multiunit complexes. These representatives aid our customers with CAP enrollment and LIHEAP application completion.

Q. What are the operating results of these programs?

A. For the CAP Program, there were 27,566 customers participating in CAP by yearend 2007, 30,799 CAP customers by year end 2008 and 33,291 CAP customers by year end 2009. Based on previous growth trends, Duquesne Light expects the CAP enrollment to exceed 36,000 participants in 2010 and the projected expenditures to be in excess of $17,500,000. In 2007, CAP customers benefited by over $2.28 million in arrearage forgiveness and $8.12 million in deficiency adjustments. In 2008, CAP customers benefited by nearly $2.13 million in arrearage forgiveness and over $10.2 million in deficiency adjustments.

In 2009, CAP customers benefited by nearly $2.28 million in arrearage forgiveness and over $11.6 million in deficiency adjustments.

CARES continue to provide invaluable assistance to thousands of customers each year as described above.

Dollar Energy Fund Grants assisted 1,408 households in 2007, 1,740 households in 2008, and 2,083 households in 2009. The potential benefit to customers was $750,000 in grants for each year. The average grant size varied between $360 and $411.

Smart Comfort works in conjunction with the CAP program. All applicants to the CAP program who are electric heat customers must complete a Smart Comfort visit prior to enrollment in CAP. All residential service CAP applicants who own their home and have a base load usage in excess of 500 kWh per month must complete a Smart Comfort visit prior to CAP enrollment. Finally, all remaining residential service CAP applicants who have lived at their premise for at least six months and have a base load usage in excess of 500 kWh per month must complete a Smart Comfort visit prior to CAP enrollment.

Customers who enroll in CAP and participate in Smart Comfort benefit from a lower payment amount and are equipped with the tools to proactively reduce their monthly payment even further with energy conservation. The latest Consumer Services LIURP Cost and Energy Savings Analysis from the Pennsylvania State University revealed that Smart Comfort yields a 16.5% reduction in energy usage or a reduction of approximately $165 from the participants' average annual electricity cost. In 2007, 4,688 customers received Smart Comfort. In 2008, 4,189 customers received Smart Comfort. 4,250 customers received Smart Comfort in 2009, and in 2010 we expect to maintain that level of performance.

LIHEAP/CRISIS Outreach provides positive results for our customers in need. During the 2006-2007 Program Year, 11,823 customers received LIHEAP or CRISIS grants for over $3.1 million in assistance for their electricity bills. This reflects 6,009 LIHEAP grants for $1.6 million and 5,814 CRISIS grants for $1.5 million. During the 2007-2008 Program Year, 12,223 customers received

LIHEAP or CRISIS grants for over $3.6 million in aide. This reflects 7,135 LIHEAP grants for $1.9 million and 5,088 CRISIS grants for $1.7 million. During the 2008-2009 Program Year, 17,406 customers received LIHEAP or CRISIS grants for over $7.1 million in assistance for their electricity bills. This reflects 8,603 LIHEAP grants for $2.9 million and 8,803 CRISIS grants for over $4.1 million. And finally in the 2009-2010 Program Year YTD, 18,292 customers received LIHEAP or CRISIS grants for over $3 million in assistance for their electricity bills. This reflects 16,887 LIHEAP grants for $2.7 million and 1,333 CRISIS grants for over $338,000.

Q. Does Duquesne Light intend to offer these programs in 2011?

A. Yes, as discussed in connection with each of the programs above, Duquesne Light plans to offer all Universal Services programs in 2011.

Q. Is Duquesne Light proposing as part of this case any modifications to the features of these programs?

A. While Duquesne Light is not proposing any modifications to the functionality or base objectives of the programs, it is recognizing that the participation level in some programs will greatly exceed the participation levels under Duquesne Light's Universal Service and Energy Conservation Plan 2008-2010. For example, the conservation plan projected CAP enrollment levels at 29,000 customers for each year 2008 - 2010. Duquesne Light had already exceeded 34,000 CAP customers at the beginning of April 2010. Because of the proposed change to proactively enroll the Company's LIHEAP recipients into CAP mentioned earlier in the testimony, Duquesne Light anticipates an increased CAP enrollment levels to 47,200 customers in 2011, to 51,900 customers in 2012, and to 56,600 customers in 2013. The Company has based its CAP claim in this proceeding on the estimated number of CAP participants as of the end of the FTY, or March 31, 2011. If the Commission approves the Company's proposed universal service surcharge mechanism, the Company will reflect any increases or decreases in CAP participants in the surcharge mechanism.

Also, Duquesne Light currently applies LIHEAP grants against the CAP shortfall. The proposed changes to LIHEAP by the Department of Public Welfare ("DPW") may prohibit the application of grants to offset pre-program arrearages or revenue shortfalls/CAP credits. In addition, LIHEAP cash benefits for CAP customers would first be applied to the current and past due "Ask to Pay" amounts (monthly CAP payment) and if funds still remain from the grant, it will be applied to future "Ask to Pay' amounts.

Q. What are the proposed annual expense requirements by Duquesne Light for these programs?

A. Total expenditure for Universal Service Programs in 2009 was $17,958,094. This includes amounts of $14,977,956 for CAP, $2,405,138 for Smart Comfort, $125,000 for CARES, and $450,000 for the hardship fund. However, as stated above, due to the anticipated increased enrollment in CAP and modifications to the application of LIHEAP grants, future costs are estimated to exceed 2009 expenditures.

As mentioned earlier, there have been changes as to the way payments are to be applied to a customer's account. To comply with these changes, Duquesne Light will now apply LIHEAP cash grants only to the customer's monthly "Asked to pay" amounts and no LIHEAP funds will be applied to the CAP customer's pre-program arrearages or actual usage amounts. The proposed financial effect of this change is estimated by Duquesne Light to be an increase of costs of $2.4 million per year. Because of this, Duquesne Light had amended the proposed Universal Service Plan submitted February 25, 2010 to reflect this increased amount. The total proposed expenditures for 2011 are $28,136,600. This includes amounts of $26,200,000 for CAP, $1,361,600 for Smart Comfort, $125,000 for CARES, and $450,000 for the hardship fund. For 2012, total expenditures are projected to be $30,536,600 that includes amounts of $28,600,000 for CAP, $1,361,600 for Smart Comfort, $125,000 for CARES, and $450,000 for the hardship fund. And finally for 2013, total expenditures are projected to be $32,866,600 that includes amounts of $30,930,000 for CAP,

$1,361,600 for Smart Comfort, $125,000 for CARES, and $450,000 for the hardship fund.

Q. How would Duquesne Light fund these proposed increases?

A. As explained by Mr. Eichenmiller and Mr. Pfrommer, the Company proposes to recover its costs for its universal service programs through a universal service surcharge.

Q. Do you think these proposed increases are in the best interests of Duquesne Light and its customers?

A. Yes, I do. Energy is becoming more expensive. Governmental assistance falls short of the needs of low-income customers. Since electricity is so critical to everyday life and activities, I think it is important that Duquesne Light tries its best to assist its customers in paying for the energy they require. Conservation should and does play a role in reducing customers' energy bills. We are trying to increase our assistance to these customers but at the same time keep the costs of such programs reasonable.

Q. Does this conclude your direct testimony?

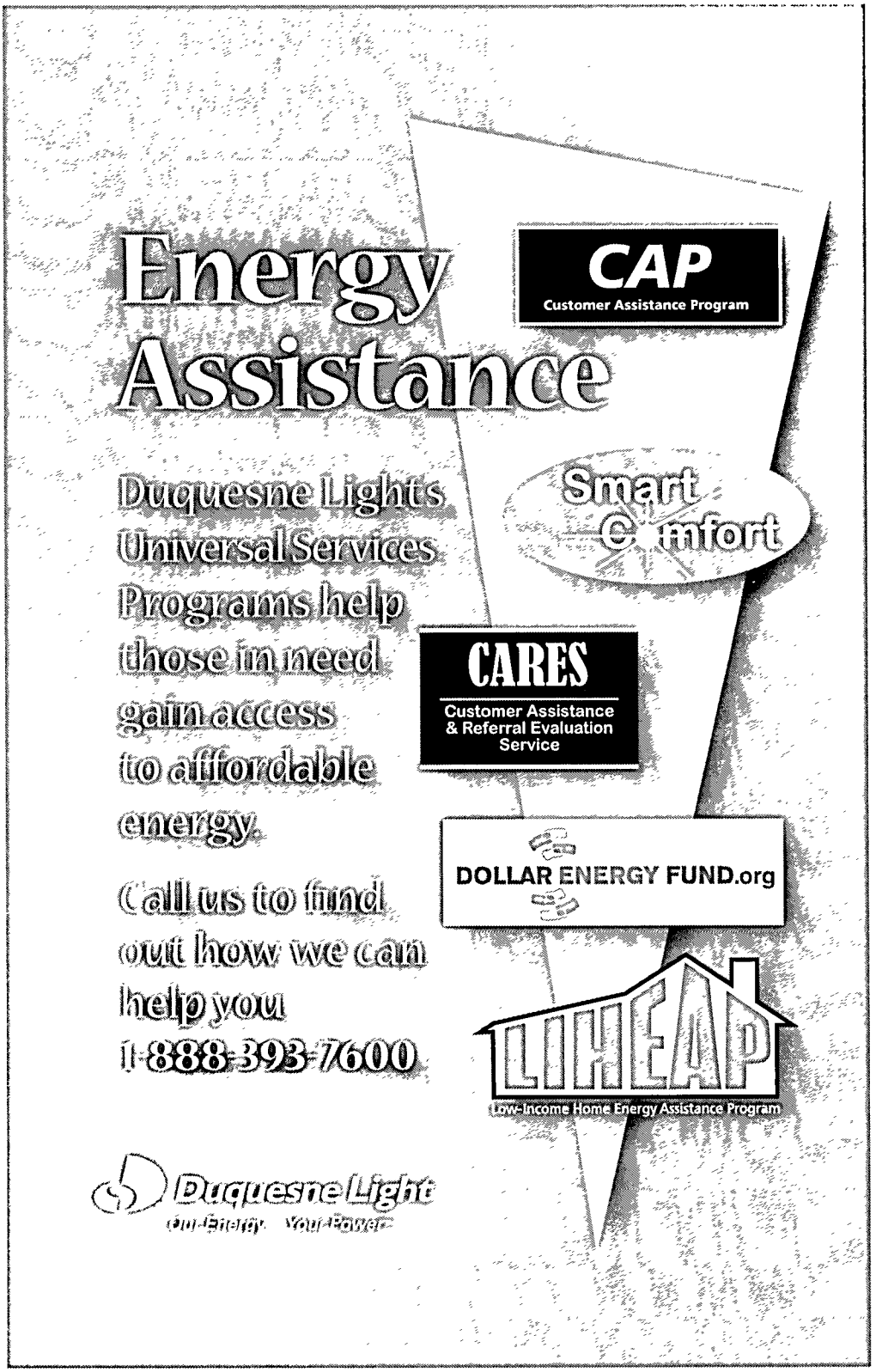
A. Yes, it does.

Exhibit MRS – 1

QUALIFICATION AND EXPERIENCE OF MICHELE R. SANDOE

I have been in my current position of Director of Customer Care since March 2007. Previous to my present position, I was Director of Revenue Cycle for nearly two years. Prior to Revenue Cycle, I had an active position within Universal Services for nearly five years. My tenure in Universal Services began in September 2000 as an Assistant Manager. In January 2002, I became Manager of Universal Services and the On-Line Collection System and in July 2004, I accepted the position of Manager of Credit & Collections and Universal Services. I began my career at Duquesne Light as an Analytical Consultant in December 1996. I have a Bachelor of Science in Industrial Engineering from the University of Pittsburgh and a Master of Science in Industrial and Operations Engineering from the University of Michigan.

Exhibit MRS – 2



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Introduction

Through Universal Services Programs, such as CAP, Smart Comfort, CARES, Dollar Energy Fund and LIHEAP, Duquesne Light intends to cost effectively ensure that payment-troubled customers on a limited or fixed income have access to affordable energy.

Duquesne Light works with eligible customers to:

- Establish affordable payment arrangements that maintain electric service and assist customers in achieving self-sufficiency in paying their bill.
- Provide assistance in reducing their electric consumption to a more affordable level.

We are here to help you. Just call 1-888-393-7600.

CAP
Customer Assistance Program

Goal of CAP

The goal of Duquesne Light's Customer Assistance Program is to help low-income households that have an inability to pay their electric bill receive affordable energy. As a qualified customer, you will be assisted in achieving self-sufficiency by making timely payments.

Program Benefits

- Protection against loss of electric service.
- Reduced monthly payments based on ability to pay.
- Arrearage forgiveness over a specified period of time.
- Information about reducing your electric use.
- Toll-free number for questions and information.
- Referrals to other community resources, such as:

Dollar Energy Fund	Housing	Food Programs
Employment	Counseling	LIHEAP
Rehabilitation	Transportation	

How to Qualify for CAP

- The name on your account must be an adult (18 years of age or older) living in the household.
- Your monthly and/or yearly household income must fall within federal income guidelines.

CAP Customer Assistance Program

How to Apply for CAP

1. **Call our Universal Services Center at: 1-888-393-7600**

   A Duquesne Light representative will provide the name and telephone number of the CAP agency nearest you. When you contact that CAP agency, please have the following information available:

   - Monthly and/or yearly income of all household members.
   - Names, birth dates and Social Security numbers of all household members.
   - Household expenses, such as rent, utility bills, food and insurance payments.

   Some applications can be processed over the telephone.

2. **Provide proof of income.**

   You may be required to provide proof of your monthly and/or yearly household income at the CAP agency specified by the Duquesne Light representative.

3. **To remain a CAP customer, you must complete the steps of the application process annually.**

CAP Customer Assistance Program

Your CAP Payment

If you qualify for CAP, you will be put on a payment plan and will be required to make an on-time monthly payment. Your payment is based upon your ability to pay.

Current Charges	Monthly CAP payment will be based on a percentage of your monthly budget amount.
Past Due Amount	1/36 of your arrearage amount will be forgiven for each monthly, on-time, complete payment. If you remain in CAP, you can pay off your past due amount.

Reducing Your Account Balance

You can completely forgive your account balance if you make your monthly payments on time for three consecutive years.

CAP Customer Assistance Program

Your Responsibilities

- Pay your monthly CAP payment by the due date.
- Apply for energy assistance grants, when available.
- Participate in energy education.
- Conserve electricity.
- Accept weatherization measures, if you qualify.
- Accept any changes to the CAP Program.
- Notify Duquesne Light's Universal Services Center of any change in income, residence or number of household members.

➪ If you do not maintain your responsibilities, you may be removed from the program.

➪ For more information about Energy Assistance Grants, please call our Universal Services Center at 1-888-393-7600.

Smart Comfort
Usage Reduction Program

Goal of Smart Comfort

The goal of Duquesne Light's Smart Comfort Program is to help you reduce your electric bill.

Program Benefits

- Conservation measures at no charge to you.
- Energy education.
- Services and measures to reduce your electric use and lower your monthly bill.
- Energy audit.
- Toll-free number for questions and information.
- Referrals to other community resources.

Weatherization Measures

An energy manager will visit you in your home and provide energy education and usage reduction measures through an energy audit.

The Home Energy Audit Will:

- Investigate potential savings areas.
- Measure usage of targeted electrical equipment.
- Provide energy education.
- Apply energy reduction measures, where needed.

Smart Comfort Usage Reduction Program

How to Quality for Smart Comfort

- The name on your account must be an adult (18 years of age or older) living in the household.
- Meet at least one of the following three criteria:
  - own your home.
  - be an electric heating customer.
  - have continuous electric service at your current residence for the previous six months.
- You have not had a Smart Comfort visit in the last seven years.
- Your monthly and/or household yearly income must fall within federal income guidelines.
- Your monthly average usage must be greater than 500 kilowatt-hours (kWh).

Smart Comfort Usage Reduction Program

How to Apply for Smart Comfort

1. Call Smart Comfort at 1-866-282-3147

When you call, please have the following information available:

- Your 13-digit Duquesne Light account number (upper right on bill).
- Monthly and/or yearly income of all household members.
- The phone number(s) at which you can be reached.

2. Provide proof of income

You may be required to provide proof of your monthly and/or yearly household income to the energy manager during the home visit.

Your Responsibilities

- Participate in energy audit and energy education with an Energy Manager.
- Accept any weatherization or conservation measures.
- Conserve energy.

CARES

Customer Assistance & Referral Evaluation Service

Hardships, such as loss of income due to injury, illness or death of primary wage earner, can strike anyone at anytime. When they do, payment problems may occur. Many customers experiencing these types of problems are not aware of the programs and services available to help them.

Goal of CARES

The goal of Duquesne Light's CARES program is to assist payment-challenged customers and special-needs customers to obtain necessary social service support and assistance.

Program Benefits

- Home visit by CARES representative.
- Information about reducing your electric use.
- Toll-free number for questions and information.
- Referrals to other Duquesne Light programs.
- Referrals to other community resources, such as:

Dollar Energy Fund	Housing	Food Programs
Employment	Counseling	LIHEAP
Rehabilitation	Transportation	

CARES Customer Assistance & Referral Evaluation Service

How to Qualify for CARES

There are no income guidelines to qualify for the CARES Program. You may qualify for CARES if you:

- Are experiencing a temporary hardship.
- Are willing to work together with a CARES representative.

Examples of Temporary Hardships

- Serious illness or injury to a member of household.
- Death of primary wage earner.
- SSI or disability recipient.
- Low-income elderly.
- Low-income single parent.
- Loss of income to household.
- Marital or family problems.
- Loss of unemployment benefits.
- High medical bills.
- Mental health disability.

CARES Customer Assistance & Referral Evaluation Service

How to Apply for CARES

1. **Call our Universal Services Center at: 1-888-393-7600**
   A Duquesne Light representative will provide the name and telephone number of the CARES agency nearest you. When you contact that CARES agency, please have the following information available:
   - Monthly and/or yearly income of all household members.
   - Names, birth dates and Social Security numbers of all household members.
   - Household expenses, such as rent, utility bills, food and insurance payments.
2. **Provide proof of income.**
   You may be required to provide proof of your monthly and/or yearly household income.

Your Responsibilities

- Must apply for energy assistance grants, if eligible.
- Must contact agencies suggested to you by the CARES representative.
- Conserve electricity.

➔If you do not maintain your customer responsibilities, you may be removed from the program.

Dollar Energy Fund

DOLLAR ENERGY FUND.org

Since 1983, the Dollar Energy Fund has been helping to make basic utilities more affordable for people with fixed or limited incomes. The fund is a private charity founded by a group of community, religious and business leaders.

The Fund assists with energy bills that are no longer manageable. Individuals apply once a year for each utility and are not expected to pay the grants back.

Goal of the Dollar Energy Fund Grant Program

The goal of the Grant Program is to help customers understand and access community resources to solve their heat, light and water payment problems as a step toward greater self-sufficiency.

Program Benefits

- Prevent termination of electric service.
- Restore electric service if terminated.

Dollar Energy Fund

Program Eligibility Dates

- The program is open from Oct. 1 through Nov. 30 for services that are off or in threat of termination only.
- Beginning Dec. 1 through Jan. 31, an applicant's service must be off.
- During the month of February, an applicant's service must be off or in threat of termination.
- On March 1, the program is open to all eligible customers regardless of service status, while funds are available.

How to Qualify for Grant Program

- Your account must be residential, single home or apartment.
- The name on your account must be an adult (18 years of age or older) living in the household.
- You must have paid at least $150 on your account in the last 90 days. Senior citizens (age 62 and over) must have paid at least $100.
- You must have a balance on your electric bill of at least $100.
- Senior citizens age 62 and over may have a zero balance, as long as there is no existing credit on the account.
- Your monthly and/or yearly household income must fall within federal income guidelines.

Dollar Energy Fund

How to Apply for the Grant Program

1. Call our Universal Services Center at: 1-888-393-7600

The Duquesne Light representative will refer you to a screening agency in your area that will assist you in filling out the Grant Program application.

When you place your call to the screening agency, please have the following information available:

- Monthly and/or yearly income of all household members.
- Names, birth dates and Social Security numbers of all household members.
- Household expenses, such as rent, utility bills, food and insurance payments.

Provide proof of income.

You will be required to provide proof of your monthly and/or yearly household income when you visit the screening agency to fill out the Grant Program application.

Your Responsibilities

- Make a sincere effort to pay your monthly electric bill.
- Contact Duquesne Light to set up payment arrangements.

LIHEAP

Low-Income Home Energy Assistance Program

Goal of LIHEAP

LIHEAP helps eligible customers on low or limited incomes pay their heating bills through energy assistance grants. You do not have to have an unpaid bill to receive energy assistance.

The Department of Public Welfare administers LIHEAP and establishes dates in which LIHEAP is available.

How to Qualify for LIHEAP

- You must be responsible for your home heating costs.
- Your monthly and/or yearly household income must fall within federal income guidelines.

CRISIS Grants:

Additional money is available if you have an emergency situation and are in danger of losing your heat.

Emergency Situations Include:

- Broken heating equipment or leaking lines which must be fixed or replaced.
- Being without fuel.
- Utility service termination.
- In danger of being without fuel or having utility service terminated

Assistance with emergency situations is available 24 hours a day. Call your local County Assistance Office for information.

LIHEAP Low-Income Home Energy Assistance Program

How to Apply for LIHEAP

1. Call or visit your local County Assistance Office to set up an appointment.

If you think you qualify, contact your local County Assistance Office as soon as possible. Be sure to apply at the office for the county where you live. Funds for this program are limited and the program is only open a short time.

When you apply for LIHEAP, you will need to bring the following information:

- Proof of monthly and/or yearly income of all household members.
- Names, birth dates and Social Security numbers of all household members.
- A recent heating bill.

If You Qualify for LIHEAP

Thirty days after you apply for energy assistance, you will receive written notice telling you if you are eligible and the amount you will receive.

A payment will be sent directly to your utility/fuel company, and the payment will be credited on your bill. In some cases, the check may be mailed to you for forwarding to your utility/fuel company.

For further information and to learn the dates of assistance availability, call Duquesne Light's Universal Services Center at 1-888-393-7600.

Universal Services Community Partners

Goodwill Industries
345 Fifth Ave.
McKeesport, PA 15132
Phone: 412-664-1967
Fax: 412-664-1369

Goodwill Industries
2600 East Carson St.
Pittsburgh, PA 15203
(South Side)
Phone: 412-390-2313
Fax: 412-481-2280

Holy Family Institute
19 May St.
McKees Rocks, PA 15136
Phone: 412-331-8665
Fax: 412-331-0982

Holy Family Institute
211 N. Whitfield St.
Pittsburgh, PA 15206
(East Liberty)
Phone: 412-361-2583
Fax: 412-361-2599

Holy Family Institute
Towne Center Offices
1789 S. Braddock Ave.
Suite 585
Pittsburgh, PA 15218
Phone: 412-244-8010
Fax: 412-244-8090

Holy Family Institute
The Franklin Center
524 Franklin Ave.
Aliquippa, PA 15001
Phone: 724-378-2882
Fax: 724-378-9809

North Hills Community Outreach
416 Lincoln Ave.
Pittsburgh, PA 15209
(Millvale)
Phone: 412-487-6316
Fax: 412-821-5480

Northside Common Ministries
1601 Brighton Rd.
Pittsburgh, PA 15212
Phone: 412-322-6588

Duquesne Light Universal Services Center

1-888-393-7600

Hours of Operation
8 a.m. to 5 p.m.
Monday - Friday

Offering a wide range of
energy assistance programs
for those in need

Duquesne Light
Our Energy. Your Power.

BEFORE THE

PENNSYLVANIA PUBLIC UTILITY COMMISSION

Docket No. R-2010-2179522

Duquesne Light Company

Statement No. 11

Testimony of Byron Beebe

DIRECT TESTIMONY
OF
BYRON BEEBE

BACKGROUND INFORMATION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Byron Beebe and my business address is Hewitt Associates, 5005 Rockside Road, Suite 1000 Independence, OH 44131.

Q. WHO IS YOUR EMPLOYER AND WHAT IS YOUR OCCUPATION?

A. I am an actuary and retirement consultant for Hewitt Associates, a leading actuarial and human resources consulting firm.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND YOUR PROFESSIONAL EXPERIENCE.

A. I am a Fellow of the Society of Actuaries, an Enrolled Actuary, and a Member of the American Academy of Actuaries. I earned a B.A. degree in mathematics from Wabash College and have been employed by Hewitt since 1991.

I am a Managing Principal in Hewitt's Retirement Consulting practice and consult with clients regarding the design and financing of retirement programs, including defined benefit pension, defined contribution 401(k), and retiree welfare programs.

PENSION FUNDING

Q. HOW ARE PENSION CASH CONTRIBUTIONS DETERMINED?

A. Cash contribution amounts are determined under rules governed by the Internal Revenue Service. These rules have been revised from time to time since prefunding of pension obligations was first required under the Employee Retirement Income Security Act (ERISA) in 1974. Most recently, the Pension Protection Act of 2006 (PPA) included a major overhaul of the funding rules. PPA had impacted plan sponsor funding requirements in two major ways.

First, the calculation of minimum funding requirements is now based on the plan's Normal Cost (the annual cost of benefits earned during the year by active participants) plus an amortization of a plan's Funding Shortfall (the excess of the plan's liabilities over the plan's assets). The rules are designed with the goal of achieving a funded status of 100% over a 7-year period.

Second, PPA imposes certain restrictions on plan sponsors when a pension plan's funded status falls below certain thresholds. The threshold that is most relevant to Duquesne Light is the "80% threshold" which limits the company's ability to provide lump sum payments from the plan or negotiate future benefit improvements for union employees when the plan is below an 80% funded status.

For Duquesne Light, plan liabilities (called the Funding Target) are determined based on assumptions determined by Hewitt in consultation with Duquesne Light. Key demographic assumptions, such as retirement rates and turnover, are based on Actuarial Standards of Practice which takes into account historical experience for Duquesne Light. Mortality and interest assumptions are prescribed under PPA.

The actuarial valuation projects expected benefit payments over the next 80+ years and discounts those payments back to the valuation date using the interest rate assumption. Under PPA, interest rates reflect interest rates on investment grade corporate bonds. Duquesne Light can choose to use a full yield curve (Yield Curve), which provides interest rates at half year intervals, or a three-tiered simplified yield curve (Segment Rates), which uses a short-term interest rate to discount benefit payments over the next 5 years, a mid-term rate to discount payments expected to be made between 5-20 years from the valuation date, and a long-term interest rate for payments expected beyond 20 years from the valuation date. Duquesne Light will elect to use Segment Rates to determine the Funding Target beginning in 2010. Selecting Segment Rates results in the lowest contribution requirements over the next two years and also will result in less volatility over the long-term, which will make contributions easier to predict in the future.

The amount required to be contributed each year is based on the plan's normal cost (the present value of benefits earned during the year by active employees) plus an amortization payment on the current Funding Shortfall (the Funding Target minus the Value of Plan Assets).
PPA imposed restrictions under IRC Section 436, if a plan's funded status (called the Adjusted Funding Target Attainment Percentage or AFTAP) is under 80%. Duquesne Light's funding strategy is to contribute the minimum required contribution. If additional amounts would be required to keep the plan's funded status no lower than 80%, the company will also make those contributions.

Q. WHAT ARE THE EXPECTED CONTRIBUTIONS REQUIRED UNDER THE DUQUESNE LIGHT PENSION PLAN FOR THE YEARS 2010-2012?

A. Below is a three-year projection of estimated pension plan contributions:

(in $millions)	2010	2011	2012
Expected Contributions	$50.0	$90.3	$48.0

These contributions will allow Duquesne to stay above the 80% PPA threshold and cover all minimum required contributions. These contribution projections were estimated assuming asset returns of 8.2% per year and projected Segment Rates.

Q. WHAT ARE THE PRIMARY DRIVERS OF CONTRIBUTIONS AND THE VOLATILITY ASSOCIATED WITH THOSE AMOUNTS?

A. The primary drivers of cash contributions are legal requirements, plan design, interest rates and asset returns.

1. Legal Requirements – As described above, the company will make all legally required contributions to the plan in accordance with ERISA and PPA.
2. Plan Design – The company has closed the pension plan to new salaried employees in an effort to slow the liability growth of the plan.
3. The Level of Interest Rates – specifically, the interest rates used under PPA to discount future expected benefit payments to determine the present value of those payments. These rates are reset each year as of the measurement date and can have a significant impact on the level of pension obligations and pension expense. Generally, if interest rates decrease by 1%, it can increase obligations by approximately 10%.

4. Pension Trust Asset Returns – as market returns rise and fall, so do the assets held in trust to meet pension obligations. Generally, if market values of pension trust assets fall, the plan will experience an increase in required contributions.

Q. PLEASE COMMENT ON THE PLAN'S FUNDED STATUS AND THE COMPANY'S MANAGEMENT OF THE PENSION PLAN

A. The funded status of Duquesne Light's pension plan is typical of other corporate pension plans. Since the market downturn of 2008, many companies have plans that are about 80% funded on a PPA basis.

The Company's Board of Directors and the Pension Investment Committee are responsible for monitoring investment performance and the funded status of the plan. The Pension Investment Committee acts as a plan fiduciary and as such must act in accordance with the interests of plan participants. To assist in this role, Duquesne engages an independent investment advisor, Bilkey-Katz, to provide regular monitoring and advice with respect to overall allocation advice and individual asset managers.

We believe that the company's corporate governance of the pension plan is prudent and appropriate.

Q: DOES THIS COMPLETE YOUR TESTIMONY?

A: Yes.

BEFORE THE

PENNSYLVANIA PUBLIC UTILITY COMMISSION

Docket No. R-2010-2179522

Duquesne Light Company

Statement No. 12

Direct Testimony of Paul R. Moul

Duquesne Light Company
Direct Testimony of Paul R. Moul
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GLOSSARY OF ACRONYMS AND DEFINED TERMS	
ACRONYM	**DEFINED TERM**
AFUDC	Allowance for Funds Used During Construction
AMT	Alternative Minimum Tax
β	Beta
b	Represents the retention rate that consists of the fraction of earnings that are not paid out as dividends
b x r	Represents internal growth
CAPM	Capital Asset Pricing Model
CCR	Corporate Credit Rating
CE	Comparable Earnings
CWIP	Construction Work in Progress
DCF	Discounted Cash Flow
DLH	Duquense Light Holdings, Inc.
EPACT	National Energy Policy Act
FERC	Federal Energy Regulatory Commission
FOMC	Federal Open Market Committee
g	Growth rate
IGF	Internally Generated Funds
Lev	Leverage modification
LT	Long Term
MLP	Master Limited Partnerships
NUGS	Non-utility generators
OCI	Other Comprehensive Income
POLR	Provider of last resort
PPUC	Pennsylvania Public Utility Commission
PUC	Public Utility Commission
r	represents the expected rate of return on common equity
Rf	Risk-free rate of return
Rm	Return on the market
RP	Risk Premium

GLOSSARY OF ACRONYMS AND DEFINED TERMS	
ACRONYM	**DEFINED TERM**
RTO	Regional Transmission Organizations
s	Represents the new common shares expected to be issued by a firm
s x v	Represents external growth
S&P	Standard & Poor's
v	Represents the value that accrues to existing shareholders from selling stock at a price different from book value
ytm	Yield to maturity

DIRECT TESTIMONY OF PAUL R. MOUL

INTRODUCTION AND SUMMARY OF RECOMMENDATION

Q. Please state your name, occupation and business address.

A. My name is Paul Ronald Moul. My business address is 251 Hopkins Road, Haddonfield, New Jersey 08033-3062. I am Managing Consultant at the firm P. Moul & Associates, an independent financial and regulatory consulting firm. My educational background, business experience and qualifications are provided in Appendix A, which follows my direct testimony.

Q. What is the purpose of your testimony?

A. My testimony presents evidence, analysis and a recommendation concerning the appropriate rate of return that the Pennsylvania Public Utility Commission ("PPUC" or the "Commission") should recognize in the determination of the revenues that Duquesne Light Company ("Duquesne Light" or the "Company"), should realize as a result of this proceeding. My analysis and recommendation are supported by the detailed financial data contained in Exhibit PRM-1, which is a multi-page document divided into fourteen (14) schedules. Additional evidence, in the form of appendices, follows my direct testimony. The items covered in these appendices provide additional detailed information concerning the explanation and application of the various financial models upon which I rely.

Q. Based upon your analysis, what is your conclusion concerning the appropriate cost of common equity and rate of return for the Company?

A. My conclusion is that the Company's cost of common equity is within the range of 11.25% to 11.75%. From this range, the Company has proposed an 11.25% rate of return on common equity. The Company's proposed rate of return on common

equity was selected to minimize the impact of the proposed increase on customer rates. In determining the rate of return on common equity, the Commission should consider the exemplary performance of the Company's management, including its high quality of customer service. With this return, I have presented on Schedule 1 the weighted average cost of capital, which is 8.78%. The resulting overall cost of capital, which is the product of weighting the individual capital costs by the proportion of each respective type of capital, should, if adopted by the Commission, establish a compensatory level of return for the use of capital and provide the Company with the ability to attract capital on reasonable terms.

Q. What background information have you considered in reaching a conclusion concerning the Company's cost of capital?

A. Duquesne Light is wholly-owned subsidiary of Duquesne Light Holdings, Inc ("DLH" or the "Parent Company"). The Company provides electric delivery service and provider of last resort ("POLR") service to approximately 588,000 customers in Allegheny and Beaver counties. In 2009, electric sales in Mwh for Duquesne Light were comprised of approximately 29% to residential, 48% to commercial, 22% to industrial customers, and 1% to street lighting and sales for resale customers. Approximately 9% of the Company's sales were to heating customers. This means that the Company's residential sales in both the winter and summer periods are sensitive to variations in temperature. Further, approximately 42% of the Company's sales are related to POLR service.

The Company is presently operating under its fourth provider of last resort ("POLR IV") rate plan. Under POLR IV, residential and small commercial

customers obtain service under fixed rates through December 31, 2010. For small commercial and industrial customers, the POLR IV rate plan provides a price that is adjusted every six months. Large commercial and industrial customers receive POLR service at hourly rates through day-ahead market rates determined in the PJM Interconnection market. On May 20, 2010, the Commission approved the Company's POLR V covering service from January 2011 to May 2013.

Q. How have you determined the cost of common equity in this case?

A. The cost of common equity is established using capital market and financial data relied upon by investors to assess the relative risk, and hence the cost of equity, for an electric utility, such as Duquesne Light. In this regard, I relied on four well-recognized measures of the cost of equity: The Discounted Cash Flow ("DCF") model, the Risk Premium ("RP") analysis, the Capital Asset Pricing Model ("CAPM"), and the Comparable Earnings ("CE") approach. The results of a variety of approaches indicate that the Company's rate of return on common equity is within the range of 11.25% to 11.75%.

Q. In your opinion, what factors should the Commission consider when determining the Company's cost of capital in this proceeding?

A. The Commission's rate of return allowance must provide a utility with the opportunity to cover its interest and dividend payments, provide a reasonable level of earnings retention, produce an adequate level of internally generated funds to meet capital requirements, be adequate to attract capital in all market conditions, be commensurate with the risk to which the utility's capital is exposed, and support reasonable credit quality. I have explained the basis of these ratesetting principles

in Appendix B.

Q. What factors have you considered in measuring the cost of equity in this case?

A. The models that I used to measure the cost of common equity for the Company were applied with market and financial data developed from my proxy group of seven electric companies. The criteria that I used to assemble the seven company proxy group will be described later in my testimony. The companies in the electric proxy group are identified on page 2 of Schedule 3. I will refer to these companies as the Electric Group throughout my testimony.

Q. How have you performed your cost of equity analysis with the market data for the Electric Group?

A. I have applied the models/methods for estimating the cost of equity using the average data for the Electric Group. I have not measured separately the cost of equity for the individual companies within the Electric Group. By employing group average data, rather than individual Company's analysis, I have helped to minimize the effect of extraneous influences on the market data for an individual company.

Q. Please summarize your cost of equity analysis.

A. My cost of equity determination was derived from the results of the methods/models identified above. In general, the use of more than one method provides a superior foundation to arrive at the cost of equity. At any point in time, reliance on a single method can provide an incomplete measure of the cost of equity. The specific application of these methods/models will be described later in my testimony. The following table provides a summary of the indicated costs of equity using each of these approaches.

	Electric Group
DCF	11.30%
RP	11.50%
CAPM	11.12%
Comparable Earnings	12.95%
Average	11.72%
Median	11.40%
Mid-point	12.04%

From these measures of the cost of equity, I recommend that the Company's rate of return on common equity be set within the range of 11.25% to 11.75%. In setting the Company's cost of equity, the Commission should give consideration to the exemplary performance of the Company's management. The testimony of Mr. Frederick Eichenmiller explains the many initiatives that the Company has undertaken, which have produced high quality service at reasonable prices. In particular, Mr. Eichenmiller has shown that the Company ranks high in customer service and its reliability has been exceptional. In recognition of its outstanding performance, the Company should be granted an opportunity to earn a rate of return on common equity of at least 11.25%. I also believe my recommended cost of equity is appropriate in this case because it makes no provision for the prospect that the rate of return may not be achieved due to unforeseen events that could occur during the rate effective period and the large construction projects underway.

ELECTRIC UTILITY RISK FACTORS

Q. Please identify some of the factors that make the electric utility industry

generally different today than it was in the past.

A. Today, electric utilities generally are faced with meaningful changes in the fundamentals that affect their operations, while cost of service pricing continues to dominate much of their business profile. On the national level, the passage of the National Energy Policy Act ("EPACT") and the issuance of FERC Order Nos. 888 and 889 and Order No. 2000 initiated sweeping changes that fundamentally altered the structure of the electric utility business. EPACT removed certain impediments to the construction of non-utility generators ("NUGs") by utility affiliates and by independent developers. Order Nos. 888 and 889 have provided these generators, as well as other utilities, with the ability to sell their energy directly to wholesale customers, as well as to end-use customers in states with retail competition. Order No. 2000 encouraged the formation of Regional Transmission Organizations ("RTO") that offer non-discriminatory transmission service. Duquesne Light is part of the PJM Interconnection, LLC. Although generation in some parts of the U.S. has become a non-regulated competitive business, the transmission and distribution of electricity will likely continue under some form of rate regulation. However, the development of distributed generation and local alternative energy has the potential to displace delivery revenue that can impact the incumbent utility's financial profile.

Q. What changes have occurred in Pennsylvania as a result of a move to more competitive markets for electricity?

A. On January 2, 2000, customer choice was fully available in Pennsylvania for electricity. From that point forward, Duquesne Light's responsibility became

primarily the provision of delivery service at regulated prices, while it also retained the responsibility for POLR service to customers that do not elect competitive energy suppliers. The restructuring of the electric business in Pennsylvania has been underway for several years.

Q. Have these changes brought about increases in the risks facing electric utilities generally?

A. Yes. Aside from its traditional responsibility to maintain reliability and comply with the mandates of PJM, a different set of risks are now evolving in a new era for the electric delivery business in Pennsylvania. The risk of distributed generation will continue to be a concern, and could have an increasing influence on the business of electric delivery utilities. With technological advances in micro-turbines, potential commercialization of fuel cells, development of wind and solar power, and the creation of micro-grids, utilities face the potential for bypass and the resulting declines in transmission and distribution revenues. At the same time, an electric utility retains the obligation to provide reliable delivery service, it must continue to invest in its rate base, and it must comply with mandates to promote conservation, without the recovery of lost margins on reduced consumption, except on a prospective basis in future rate cases.

The obligation to serve also represents a key risk factor for the local delivery of electricity. The risks facing the electric utilities are clearly different from those that existed in the past. Investors generally are risk-averse, and with increased uncertainty will require compensation for higher risk.

Q. What are the primary risk factors facing the electric utility industry?

A. In the new environment, competitive issues have or will develop due to the convergence of energy sources and bypass arising from self-generation or distributed-generation. Regulatory risks include the overall framework of ratesetting, cost allocation, and rate design issues, and the level of return that will be allowed.

The financial structure of the electric business is uncertain due to the structure and term of relationship with end-users, the adequacy of capital recovery, potential for financial penalties associated with operational problems, and growth in the utilization of the transmission and distribution network by non-affiliated generators and marketers.

Q. Please discuss further the evolving risks for electric utilities.

A. With increased emphasis on market-determined prices and open access of the transmission network, a new dimension has been opened in the electric utility business. A pricing structure restricted by regulation diminishes management's ability to adjust its business strategy quickly to changing market conditions to respond to broadening competition.

Q. Are there other specific risk issues facing the Company?

A. Yes. Energy deliveries to commercial and industrial customers, which represent 70% of the Company's energy deliveries, are usually thought to be of higher risk than to residential customers. Success in this segment of the Company's market is subject to the business cycle and pressures from alternative providers. Moreover, external factors also can influence deliveries to these customers, which face

competitive pressure on their own operations from other facilities outside the utility's service territory.

In addition, significant efforts to encourage conservation pursuant to the requirements of Act 129 create a risk that Duquesne Light's distribution revenues will likely decline between base rate cases if these efforts are successful.

Q. Please indicate how the Company's risk profile is affected by its construction program.

A. The Company is faced with the requirement to undertake investment to maintain and upgrade existing facilities in its service territory and to meet growth. Over the next five years (i.e., 2010 through 2014), the Company's total capital expenditures are expected to be approximately $927.5 million. These expenditures will represent approximately 48% ($927.5 million ÷ $1,931.7 million) of the net utility plant at December 31, 2009. A fair rate of return for the Company represents a key to a financial profile that will provide the Company with the ability to raise the capital, in all market conditions to meet its needs, and to satisfy investor requirements in an evolving industry. Under these conditions the absence of a mechanism to offset erosion of return resulting from the lag in reflecting new investment in rates, it is unlikely the Company will earn its allowed return. In the situation where additional capital is required, as shown by the construction expenditures indicated above, the regulatory process must establish a return on equity that provides a reasonable opportunity for the Company to actually achieve its cost of capital.

FUNDAMENTAL RISK ANALYSIS

Q. Is it necessary to conduct a fundamental risk analysis to provide a framework

for a determination of a utility's cost of equity?

A. Yes. It is necessary to establish a company's relative risk position within its industry through a fundamental analysis of various quantitative and qualitative factors that bear upon investors' assessment of overall risk. The qualitative factors that bear upon the Company's risk have already been discussed. The quantitative risk analysis follows. The items that influence investors' evaluation of risk and their required returns are described in Appendix C. For this purpose, I compared Duquesne Light to the S&P Public Utilities, an industry-wide proxy consisting of various regulated businesses, and to the Electric Group.

Q. What are the components of the S&P Public Utilities?

A. The S&P Public Utilities is a widely recognized index that is comprised of electric power and natural gas companies. These companies are identified on page 3 of Schedule 4.

Q. What criteria did you employ to assemble the Electric Group?

A. The Electric Group companies have the following common characteristics: (i) their stock is traded on the New York Stock Exchange, (ii) they are listed in the "Electric Utility (East)" section of The Value Line Investment Survey, (iii) they operate in the Northeast region of the U.S., (iv) they are not currently the target of a publicly-announced merger or acquisition, and (v) they do not have a significant amount of electric generation. It would be inappropriate to include a company that is a target of a takeover in a proxy group because the stock price of that company usually does not reflect its underlying fundamentals.

Q. Is knowledge of a utility's bond rating an important factor in assessing its risk

and cost of capital?

A. Yes. Knowledge of a company's credit quality rating is important because the cost of each type of capital is directly related to the associated risk of the firm. So while a company's credit quality risk is shown directly by the rating and yield on its bonds, these relative risk assessments also bear upon the cost of equity. This is because a firm's cost of equity is represented by its borrowing cost plus compensation to recognize the higher risk of an equity investment compared to debt.

Q. How do the bond ratings compare for Duquesne Light, the Electric Group, and the S&P Public Utilities?

A. For Duquesne Light, its Long Term ("LT") issuer rating is Baa2 from Moody's Investors Service ("Moody's") and the corporate credit rating ("CCR") is BBB- from Standard & Poor's Corporation ("S&P"). The LT issuer rating by Moody's and the CCR designation by S&P focuses upon the credit quality of the issuer of the debt, rather than upon the debt obligation itself. The testimony of Mr. David B. Bordo, the Company's Treasurer, provides further detail on the Company's credit ratings. For the Electric Group, the average LT issuer rating is Baa1 from Moody's and the average CCR is BBB+ from S&P. For the S&P Public Utilities, the average composite rating is Baa1 by Moody's and BBB+ by S&P. Many of the financial indicators that I will subsequently discuss are considered during the rating process. In this regard, the Company's credit quality is weaker in comparison with the Electric Group.

Q. How do the financial data compare for Duquesne Light, the Electric Group,

and the S&P Public Utilities?

A. The broad categories of financial data that I will discuss are shown on Schedules 2, 3, and 4. The data cover the five-year period 2005-2009. The important categories of relative risk may be summarized as follows:

Size. In terms of capitalization, Duquesne Light is smaller than the average size of the Electric Group. The average size of the S&P Public Utilities is much larger than the Electric Group, and the Electric Group is much larger than Duquesne Light. All other things being equal, a smaller company is riskier than a larger company because a given change in revenue and expense has a proportionately greater impact on a small firm. In addition, Duquesne Light serves a concentrated geographic area, and in particular, an urban area that is often more costly to service. As I will demonstrate later, the size of a firm can impact its cost of equity. This is the case for Duquesne Light and the Electric Group. Regarding to the issue of size, the market capitalization of the Electric Group places it in the mid-capital category, and Duquesne Light would be in the low end of that spectrum.

Market Ratios. Market-based financial ratios provide a partial indication of the investor-required cost of equity. If all other factors are equal, investors will require a higher rate of return on equity for companies that exhibit greater risk, in order to compensate for that risk. That is to say, a firm that investors perceive to have higher risks will experience a lower price per share in relation to expected earnings.

There are no market ratios available for Duquesne Light because the Company's stock is not traded. The five-year average price-earnings multiple for

the Electric Group was similar to that of the S&P Public Utilities. The five-year average dividend yield was higher for the Electric Group, as compared to the S&P Public Utilities. The average market-to-book ratio was lower for the Electric Group than for the S&P Public Utilities.

Common Equity Ratio. The level of financial risk is measured by the proportion of long-term debt and other senior capital that is contained in a company's capitalization. Financial risk is also analyzed by comparing common equity ratios (the complement of the ratio of debt and other senior capital). That is to say, a firm with a high common equity ratio has lower financial risk, while a firm with a low common equity ratio has higher financial risk. The five-year average common equity ratios, based on permanent capital, were 58.9% for Duquesne Light, 46.9% for the Electric Group, and 45.8% for the S&P Public Utilities. The financial risk for Duquesne Light was lower than that of the Electric Group based on this parameter.

Return on Book Equity. Greater variability (i.e., uncertainty) of a firm's earned returns signifies relatively greater levels of risk, as shown by the coefficient of variation (standard deviation ÷ mean) of the rate of return on book common equity. The higher the coefficients of variation, the greater degree of variability. For the five-year period, the coefficients of variation were 0.657 (4.4% ÷ 6.7%) for Duquesne Light, 0.188 (1.6% ÷ 8.5%) for the Electric Group, and 0.103 (1.2% ÷ 11.7%) for the S&P Public Utilities. The earnings variability for Duquesne Light is less meaningful in this regard due to merger related issues.

Operating Ratios. I have also compared operating ratios (the percentage of

revenues consumed by operating expense, depreciation and taxes other than income taxes). The complement of the operating ratio is the operating margin which provides a measure of profitability. The higher the operating ratio, the lower the operating margin. The five-year average operating ratios were 82.5% for Duquesne Light, 90.2% for the Electric Group, and 84.4% for the S&P Public Utilities. The operating risk for Duquesne Light is below that for to the Electric Group, and the S&P Public Utilities.

Coverage. The level of fixed charge coverage (i.e., the multiple by which available earnings cover fixed charges, such as interest expense) provides an indication of the earnings protection for creditors. Higher levels of coverage, and hence earnings protection for fixed charges, are usually associated with superior grades of creditworthiness. The five-year average interest coverage (excluding Allowance for Funds Used During Construction ("AFUDC")) was 4.80 times for Duquesne Light, 2.99 times for the Electric Group, and 3.42 times for the S&P Public Utilities. The higher interest coverage for Duquesne Light can be traced to its lower proportion of debt in its capital structure.

Quality of Earnings. Measures of earnings quality usually are revealed by the percentage of AFUDC related to income available for common equity, the effective income tax rate, and other cost deferrals. These measures of earnings quality usually influence a firm's internally generated funds because poor quality of earnings would not generate high levels of cash flow. Quality of earnings has not been a significant concern for Duquesne Light, the Electric Group, and the S&P Public Utilities.

Internally Generated Funds. Internally generated funds ("IGF") provide an important source of new investment capital for a utility and represent a key measure of credit strength. Historically, the five-year average percentage of IGF to capital expenditures was 61.9% for Duquesne Light, 84.1% for the Electric Group, and 88.4% for the S&P Public Utilities. The IGF to construction for Duquesne Light points to higher risk for the company. This situation is expected to persist because the Company's five-year forecast construction expenditures are expected to be $927.5 million, as compared to the five-year historical construction expenditures of $838.6 million.

Betas. The financial data that I have been discussing relate primarily to company-specific risks. Market risk for firms with publicly-traded stock is measured by beta coefficients. Beta coefficients attempt to identify systematic risk, i.e., the risk associated with changes in the overall market for common equities. Value Line publishes such a statistical measure of a stock's relative historical volatility to the rest of the market. A comparison of market risk is shown by the Value Line beta of .70 as the average for the Electric Group (see page 2 of Schedule 3), and .77 as the average for the S&P Public Utilities (see page 3 of Schedule 4).

Q. Please summarize your risk evaluation of the Company and the Electric Group.

A. The risk of Duquesne Light parallels that of the Electric Group in certain respects. However, Duquesne Light has a higher credit risk, as evidenced by its lower bond ratings. From the comparisons noted above, some risk indicators are higher for the Company, some are lower, and others are about the same. On balance, the risk

factors average out, indicating that the cost of equity for the Electric Group would provide a reasonable basis for measuring the Company's cost of equity. As such, the results from the Electric Group provide a reasonable measure of the Company's cost of equity.

CAPITAL STRUCTURE RATIOS

Q. Please explain the selection of capital structure ratios for Duquesne Light.

A. In the situation where the operating public utility raises its own long-term debt and preferred stock directly in the capital markets, as is the case for Duquesne Light, it is proper to employ the capital structure ratios and senior capital cost rates of the regulated public utility for rate of return purposes. Furthermore, consistency requires that the embedded cost rate of the Company's senior securities also be employed. This procedure is consistent with the procedures used by the Commission in prior rate cases.

Q. Does Schedule 5 provide the capitalization and capital structure ratios you have considered?

A. Yes. Schedule 5 presents Duquesne Light's capitalization and related capital structure at March 31, 2010, the end of the historic test year. Also shown on Schedule 5 is the Duquesne Light's estimated capital structure at March 31, 2011, the end of the future test year. During the future test year, the changes in the Company's capital structure are projected to include: (i) the remarketing of $161,455,000 of tax-exempt debt; (ii) the issuance of $253,900,755 of long-term intercompany loans; and (iii) the Company's projection of capital surplus and retained earnings at March 31, 2011.

Also reflected on Schedule 5 are several adjustments to the capital structure. The first adjustment is related to the call premiums on the early redemption or refunding of high cost long-term debt. The second adjustment relates to accumulated Other Comprehensive Income ("OCI").

Q. Please describe the first adjustment.

A. I have adjusted the principal amounts of long-term debt to exclude the amounts used to finance premiums on the early redemption of high cost long-term debt. To do otherwise would deny Duquesne Light the full return on the premiums paid to redeem this high cost capital since additional amounts of capital were issued to pay the call premiums. The amounts issued to finance the call premiums do not increase the Company's rate base. That is to say, no additional rate base was created through additional debt that was necessary to finance these transactions, and therefore an adjustment is required to provide the return necessary to service the additional capital. Hence, Duquesne Light's long-term debt amounts must be adjusted for this disparity in order that the return necessary to service the capitalization is produced from rate base investment times the overall rate of return.

This adjustment is equitable since customers receive the cost savings resulting from these refinancing in the form of a lower overall rate of return, and Duquesne Light recovers all costs incurred in providing these benefits to the customers. To accomplish these savings, the Company paid the debt holders a premium for surrendering its securities prior to maturity. These premiums represented an investment made by Duquesne Light to reduce its overall cost of capital. Since the reduced interest costs are reflected in the lower cost of capital to

ratepayers, it is appropriate that the Company recover the costs incurred to produce these savings. This includes both a return of and return on the unamortized premiums. Adjusting the principal amounts in the capital structure provides a return on the premium as a part of the embedded cost rates of capital.

Q. Please explain the second adjustment.

A. The accumulated OCI must be eliminated from the capital structure for ratesetting purposes. OCI arises from a variety of sources, including: minimum pension liability ("MPL"), foreign currency hedges, unrealized gains and losses on securities available for sale, interest rate swaps, and other cash flow hedges. The accumulated OCI must be excluded from the common equity because it does not represent funds that the Company has used to finance its rate base.

Q. What capital structure ratios do you recommend be adopted for rate of return purposes in this proceeding?

A. Since ratemaking is prospective, the rate of return should reflect known changes that will occur during the course of the future test year, at a minimum, and should consider conditions that will exist during the period of time the proposed rates will be effective. As a result, I will adopt the Company's future test year-end capital structure ratios of 42.04% long-term debt, 5.54% preferred stock, and 52.42% common equity. These capital structure ratios are the best approximation of the mix of capital the Company will employ to finance its rate base during the period new rates are in effect. As shown by the forecasts of the common equity ratios for the Electric Group, the Company's future test year common equity ratio is within

the range expected by investors. This is revealed by the Value Line forecasts shown below.

Company	2010	2011	'13-'15
CH Energy Group	51.5%	51.5%	51.0%
Central Vermont P.S.	57.0%	57.0%	60.0%
Consolidated Edison	51.5%	51.5%	51.5%
Northeast Utilities	39.5%	40.0%	40.0%
NSTAR	50.5%	51.5%	57.0%
PEPCO Holdings	47.0%	47.5%	48.0%
UIL Holdings	48.0%	48.0%	48.0%
Average	49.3%	49.6%	50.8%

The Value Line Investment Survey, February 26, 2010

COST OF SENIOR CAPITAL

Q. What cost rate have you assigned to the debt portion of Duquesne Light's capital structure?

A. Consistency with the capital structure ratios for the Company requires that the embedded cost rates of Duquesne Light's senior securities must also be employed. This procedure is consistent with the ratesetting procedures used by the Commission in prior Duquesne Light rate cases. The determination of the cost of debt is essentially an arithmetic exercise. This is due to the fact that the Company has contracted for the use of this capital for a specific period of time at a specified cost rate. As shown on page 1 of Schedule 6, the actual embedded cost rate of long-term debt was 7.30% at March 31, 2010. By March 31, 2011, the embedded debt cost rate is estimated to be 6.07%, as shown on page 2 of Schedule 6. The future

test year cost of long-term debt reflects the estimated cost for the remarketing of the $161,455,000 million of tax-exempt debt. While exempt for ordinary income tax purposes, the interest income to the holder is subject to the alternative minimum tax (AMT) on one of the five issues. The lower rate applies to four of the issues (i.e., non-ATM) and the higher rate applies to the one other issue (i.e., AMT). The intercompany loans have an indicative 4.89% interest rate. The interest rate on the intercompany loans was developed based on the terms of the affiliated interest agreement approved by the Commission. The Company received three indicative rates from three separate investment banks and used the lowest of the three rates to arrive at the 4.89% rate on the intercompany loans. The details leading to the development of the individual effective cost rates for each series of long-term debt, using the cost rate to maturity technique, are shown on page 3 of Schedule 6. The cost rate, or yield to maturity ("ytm"), used on page 3 of Schedule 6 is the rate of discount that equates the present value of all future interest and principal payments with the net proceeds of the bond.

I will adopt the 6.07% embedded cost of long-term debt at March 31, 2011, as shown on page 2 of Schedule 6. This rate is related to the amount of long-term debt shown on Schedule 5 which provides the basis for the 42.04% long-term debt ratio. In my calculation of the embedded cost of long-term debt, I have recognized the costs associated with the Company's early redemption of high cost debt. As previously explained, it is necessary to compensate Duquesne Light for the costs incurred to lower the embedded debt cost rate which reduces the cost of capital charged to ratepayers. The amortization of gains on long-term debt has also

been reflected as part of these costs during the historic test year. Subsequent thereto, the amortization of the gains ended.

Q. What preferred stock cost rate have you calculated for the Company?

A. For the future test year, I have calculated a 5.89% embedded cost of preferred stock as shown on page 2 of Schedule 7. I will adopt the 5.89% embedded cost of preferred stock, which is related to the 5.54% preferred stock ratio shown on Schedule 5. The details regarding the individual cost rates for each series of preferred stock are provided on page 3 of Schedule 7.

COST OF EQUITY – GENERAL APPROACH

Q. Please describe the process you employed to determine the cost of equity for Duquesne Light.

A. Although my fundamental financial analysis provides the required framework to establish the risk relationships among Duquesne Light, the Electric Group, and the S&P Public Utilities, the cost of equity must be measured by standard financial models that I describe in Appendix D. Differences in risk traits, such as size, business diversification, geographical diversity, regulatory policy, financial leverage, and bond ratings must be considered when analyzing the cost of equity.

It is also important to reiterate that no one method or model of the cost of equity can be applied in an isolated manner. Rather, informed judgment must be used to take into consideration the relative risk traits of the firm. It is for this reason that I have used more than one method to measure the Company's cost of equity. As noted in Appendix D, and elsewhere in my direct testimony, each of the methods used to measure the cost of equity contains certain incomplete and/or

overly restrictive assumptions and constraints that are not optimal. Therefore, I favor considering the results from a variety of methods. In this regard, I applied each of the methods with data taken from the Electric Group and determined that the cost of equity is within the range of 11.25% to 11.75%. From this range, the Company has proposed an 11.25% return.

DISCOUNTED CASH FLOW ANALYSIS

Q. Please describe your use of the Discounted Cash Flow approach to determine the cost of equity.

A. The details of my use of the DCF approach and the calculations and evidence in support of my conclusions are set forth in Appendix E. I will summarize them here. The DCF model seeks to explain the value of an asset as the present value of future expected cash flows discounted at the appropriate risk-adjusted rate of return. In its simplest form, the DCF return on common stock consists of a current cash (dividend) yield and future price appreciation (growth) of the investment.

Among other limitations of the model, there is a certain element of circularity in the DCF method when applied in rate cases. This is because investors' expectations for the future depend upon regulatory decisions. In turn, when regulators depend upon the DCF model to set the cost of equity, they rely upon investor expectations that include an assessment of how regulators will decide rate cases. Due to this circularity, the DCF model may not fully reflect the true risk of a utility.

The DCF approach has other limitations that diminish its usefulness in the ratesetting process where, as in this case, the firm's market capitalization diverges

from the book value capitalization. When this situation exists, the DCF method will lead to a misspecified cost of equity when it is applied to a book value capital structure.

Q. Please explain the dividend yield component of a DCF analysis.

A. The DCF methodology requires the use of an expected dividend yield to establish the investor-required cost of equity. For the twelve months ended April 2010, the monthly dividend yields of the Electric Group are shown graphically on Schedule 8. These monthly dividend yields reflect an adjustment to the month-end prices to reflect the buildup of the dividend in the price that has occurred since the last ex-dividend date (i.e., the date by which a shareholder must own the shares to be entitled to the dividend payment – usually about two to three weeks prior to the actual payment). An explanation of this adjustment is provided in Appendix E.

For the twelve months ending April 2010, the average dividend yield was 5.47% for the Electric Group based upon a calculation using annualized dividend payments and adjusted month-end stock prices. The dividend yields for the more recent six- and three- month periods were 5.22% and 5.19%, respectively. I have used, for the purpose of my direct testimony, a dividend yield of 5.22% for the Electric Group, which is equal to the six-month average yield. The use of this dividend yield will reflect current capital costs, while avoiding spot yields.

For the purpose of a DCF calculation, the average dividend yield must be adjusted to reflect the prospective nature of the dividend payments i.e., the higher expected dividends for the future. Recall that the DCF is an expectational model that must reflect investor anticipated cash flows for the Electric Group. I have

adjusted the six-month average dividend yield in three different, but generally accepted manners, and used the average of the three adjusted values as calculated in Appendix E. As shown on page E-7, the adjusted dividend yield is 5.39% for the Electric Group.

Q. Please explain the underlying factors that influence investor's growth expectations.

A. As noted previously, investors are interested principally in the future growth of their investment (i.e., the price per share of the stock). As I explain in Appendix E, future earnings per share growth represent the DCF model's primary focus because under the constant price-earnings multiple assumption of the model, the price per share of stock will grow at the same rate as earnings per share. In conducting a growth rate analysis, a wide variety of variables can be considered when reaching a consensus of prospective growth, including: earnings, dividends, book value, and cash flow stated on a per share basis. Historical values for these variables can be considered, as well as analysts' forecasts that are widely available to investors. A fundamental growth rate analysis also can be formulated, which consists of internal growth ("b x r"), where r represents the expected rate of return on common equity and b is the retention rate that consists of the fraction of earnings that are not paid out as dividends. The internal growth rate can be modified to account for sales of new common stock -- this is called external growth ("s x v"), where s represents the new common shares expected to be issued by a firm and v represents the value that accrues to existing shareholders from selling stock at a price different from book value. Fundamental growth, which combines internal and external growth, provides

an explanation of the factors that cause book value per share to grow over time.

Growth also can be expressed in multiple stages. This expression of growth consists of an initial growth stage where a firm enjoys rapidly expanding markets, high profit margins, and abnormally high growth in earnings per share. Thereafter, a firm enters a transition stage where fewer technological advances and increased product saturation begin to reduce the growth rate and profit margins come under pressure. During the transition phase, investment opportunities begin to mature, capital requirements decline, and a firm begins to pay out a larger percentage of earnings to shareholders. Finally, the mature or steady-state stage is reached when a firm's earnings growth, payout ratio, and return on equity stabilizes at levels where they remain for the life of a firm. The three stages of growth assume a step-down of high initial growth to lower sustainable growth. Even if these three stages of growth can be envisioned for a firm, the third steady-state growth stage, which is assumed to remain fixed in perpetuity, represents an unrealistic expectation because the three stages of growth can be repeated. That is to say, the stages can be repeated where growth for a firm ramps-up and ramps-down in cycles over time.

My use of the constant growth DCF model to measure Duquesne Light's cost of equity is compatible with the methodology adopted by the Federal Energy Regulatory Commission ("FERC") for electric utilities in *Southern California Edison Co.,* 92 FERC ¶ 61,070 (2000). In that case, FERC decided that the non-constant growth DCF model that it has historically applied to natural gas pipeline companies was not appropriate for electric utilities due to significant differences between them. In particular, FERC found that the long-term growth of the United

States economy as a whole is not a reasonable proxy for the long-term growth rate of electric utilities because the electric industry is undergoing restructuring, electric utility growth rates are different, and electric utilities typically have much higher dividend payout ratios resulting in significantly lower expected dividend growth rates than most other industrial companies. Thus, FERC applies the constant growth DCF model to determine ROEs for electric utilities and relies on company-specific long-term growth rates in applying that model. FERC has since extended its application of the constant growth DCF model to regional transmission organizations. *Bangor Hydro-Electric Co.,* 117 FERC ¶ 61,129 (2006).

Q. What investor-expected growth rate is appropriate in a DCF calculation?

A. Investors consider both company-specific variables and overall market sentiment (i.e., level of inflation rates, interest rates, economic conditions, etc.) when balancing their capital gains expectations with their dividend yield requirements. I follow an approach that is not rigidly formatted because investors are not influenced by a single set of company-specific variables weighted in a formulaic manner. Therefore, in my opinion, all relevant growth rate indicators using a variety of techniques must be evaluated when formulating a judgment of investor expected growth.

Q. What data for the proxy group have you considered in your growth rate analysis?

A. I have considered the growth in the financial variables shown on Schedules 9 and 10 of Exhibit PRM-1. The bar graph provided on Schedule 9 shows the historical growth rates in earnings per share, dividends per share, book value per share, and

cash flow per share for the Electric Group. The historical growth rates were taken from the Value Line publication that provides these data. In the instances that no values are shown on Schedule 9, the group average growth rates were negative. Negative growth rates, which significantly influence the historical data, provide no reliable guide to gauge investor expected growth for the future. Investor expectations encompass long-term positive growth rates and, as such, could not be represented by sustainable negative rates of change. Therefore, statistics that include negative growth rates should not be given any weight when formulating a composite growth rate expectation. The prospect of rate increases granted by regulators, the continuing obligation to provide safe and reliable service to customers, increasing renewable and energy efficiency requirements, the compliance with which requires capital investments, mandate investor expectations of positive future growth rates. Stated simply, there is no reason for investors to expect that a utility will wind up its business and distribute net assets to shareholders, which would be symptomatic of a long-term permanent earnings decline. Although investors have knowledge that negative growth and losses can occur, their expectations include positive growth. Indeed, rational investors expect positive returns; otherwise they would hold cash rather than invest with the expectation of a loss. Hence, negative historic values will not provide a reasonable representation of future growth expectations because, in the long run, investors will always expect positive growth. As shown on Schedule 9, the historical growth of earnings per share was in the range of 2.20% to 2.38% for the Electric Group.

Schedule 10 provides projected earnings per share growth rates taken from

analysts' forecasts compiled by IBES/First Call and Zacks and from the Value Line publication. IBES/First Call and Zacks represent reliable authorities of projected growth upon which investors rely. The IBES/First Call and Zacks forecasts are limited to earnings per share growth, while Value Line makes projections of other financial variables. The Value Line forecasts of dividends per share, book value per share, and cash flow per share have also been included on Schedule 10 for the Electric Group.

Although five-year forecasts usually receive the most attention in the growth analysis for DCF purposes, current market performance is strongly influenced by short-term earnings forecasts. Each of the major publications provides earnings forecasts for the current and subsequent year. These short-term earnings forecasts receive prominent coverage, and indeed they dominate these publications.

Q. Is a five-year investment horizon associated with the analysts' forecasts consistent with the DCF model?

A. Yes, it is. Rather than viewing the DCF in the context of an endless stream of growing dividends (e.g., a century of cash flows), the growth in the share value (i.e., capital appreciation, or capital gains yield) is most relevant to investors' total return expectations. Hence, the sale price of a stock can be viewed as a liquidating dividend that can be discounted along with the annual dividend receipts during the investment-holding period to arrive at the investor expected return. The growth in the price per share will equal the growth in earnings per share absent any change in price-earnings (P-E) multiple -- a necessary assumption of the DCF. As such, my company-specific growth analysis, which focuses principally upon five-year

forecasts of earnings per share growth, is consistent with the type of analysis that influences the total return expectation of investors. Moreover, academic research focuses on five-year growth rates as they influence stock prices. Indeed, if investors really required forecasts which extended beyond five years in order to properly value common stocks, then I am sure that some investment advisory service would begin publishing that information for individual stocks in order to meet the demands of investors. The absence of such a publication signals that investors do not require infinite forecasts in order to purchase and sell stocks in the marketplace.

Q. What specific evidence have you considered in the DCF growth analysis?

A. As to the five-year forecast growth rates Schedule 10 indicates that the projected earnings per share growth rates for the Electric Group are 5.88% by IBES/First Call, 5.34% by Zacks, and 3.57% by Value Line. The Value Line projections indicate that earnings per share for the Electric Group will grow prospectively at a more rapid rate (i.e., 3.57%) than the dividends per share (i.e., 3.20%), which indicates a declining dividend payout ratio for the future. As I indicated earlier, with the constant price-earnings multiple assumption of the DCF model, growth for these companies will occur at the higher earnings per share growth rate, thus producing the capital gains yield expected by investors.

Q. What conclusion have you drawn from these data regarding the applicable growth rate to be used in the DCF model?

A. A variety of factors should be examined to reach a conclusion on the DCF growth rate. However, certain growth rate variables should be emphasized when reaching a

conclusion on an appropriate growth rate. First, historical and projected earnings per share, dividends per share, book value per share, cash flow per share, and retention growth represent indicators that could be used to provide an assessment of investor growth expectations for a firm. However, when an analyst develops a forecast of future earnings growth, he/she first considers a utility's historical performance. Hence, there is no need to count historical growth rates separately, because historical performance is already reflected in analysts' forecasts.

Second, from the various alternative measures of growth identified above, earnings per share should receive the greatest emphasis. Earnings per share growth are the primary determinant of investor expectations concerning their total returns in the stock market. This is because the capital gains yield (i.e., price appreciation) will track earnings growth with a constant price earnings multiple (a key assumption of the DCF model). Moreover, earnings per share (derived from net income) are the source of dividend payments, and are the primary driver of retention growth and its surrogate, i.e. book value per share growth. As such, under these circumstances, greater emphasis must be placed upon projected earnings per share growth. In this regard, it is worthwhile to note that Professor Myron Gordon, the foremost proponent of the DCF model in rate cases, concluded that the best measure of growth in the DCF model is a forecast of earnings per share growth.[1] Accordingly, projections of earnings per share growth, such as those published by IBES/First Call, Zacks, and Value Line, represent a reasonable assessment of

[1]Choice Among Methods of Estimating Share Yield, The Journal of Portfolio Management, spring 1989 by Gordon, Gordon & Gould.

investor expectations.

It is appropriate to consider all forecasts of earnings growth rates that are available to investors. In this regard, I have considered the forecasts from IBES/First Call, Zacks, and Value Line. The IBES/First Call and Zacks growth rates are consensus forecasts taken from a survey of analysts that make projections of growth for these companies. The IBES/First Call and Zacks estimates are obtained from the Internet and are widely available to investors free-of-charge. First Call is probably quoted most frequently in the financial press when reporting on earnings forecasts. The Value Line forecasts are also widely available to investors and can be obtained by subscription or free-of-charge at most public and collegiate libraries.

The forecasts of earnings per share growth, as shown on Schedule 10 provide a range of growth rates of 3.57% to 5.88%. In my opinion, an investor-expected growth rate of 5.50% is reasonable considering the array of analyst earnings per share growth forecasts. The Value Line forecast of dividend per share growth is inadequate in this regard due to the forecasted decline in the dividend payout. In my opinion, a 5.50% growth rate will accommodate all these factors.

Q. Are the dividend yield and growth components of the DCF adequate to explain the rate of return on common equity when it is used in the calculation of the weighted average cost of capital?

A. Only if the capital structure ratios are measured with the market value of debt and equity. If book values are used to compute the capital structure ratios, then an adjustment is required.

Q. Please explain why.

A. If regulators use the results of the DCF (which are based on the market price of the stock of the companies analyzed) to compute the weighted average cost of capital based on a book value capital structure used for ratesetting purposes, the utility will not, by definition, recover its risk-adjusted capital cost. This is because market valuations of equity are based on market value capital structures, which in general have more equity and less debt and therefore reflect less risk than book value capital structures. The utility's risk-adjusted cost of equity will necessarily be lower with the market value capital structure than it is relative to the book value capital structure. The difference represents that portion of the utility's cost of equity that it will not recover unless either the market value cost of equity is applied to the utility's market value capital structure or it is adjusted to reflect the higher risk associated with the book value capital structure. By the same token, if the utility's market value capital structure is less than its book value structure, then the utility's market cost of equity should be adjusted downward to reflect the lower risk associated with the book value capital structure, or else the utility will over-recover its total cost of equity.

Q. Is your leverage adjustment dependent upon the market valuation or book valuation from an investor's perspective?

A. The only perspective that is important to investors is the return that they can realize on the market value of their investment. As I have measured the DCF, the simple yield (D/P) plus growth (g) provides a return applicable strictly to the price (P) that an investor is willing to pay for a share of stock. The DCF formula is derived from

the standard valuation model: $P = D/(k-g)$, where P = price, D = dividend, k = the cost of equity, and g = growth in cash flows. By rearranging the terms, we obtain the familiar DCF equation: $k= D/P + g$. All of the terms in the DCF equation represent investors' assessment of expected future cash flows that they will receive in relation to the value that they set for a share of stock (P). The need for the leverage adjustment arises when the results of the DCF model (k) are to be applied to a capital structure that is different than that which underlies the market price (P). From the market perspective, the financial risk of the Electric Group is accurately measured by the capital structure ratios calculated from the firms' market capitalizations. If the ratesetting process utilized the market capitalization ratios, then no additional analysis or adjustment would be required, and the simple yield (D/P) plus growth (g) components of the DCF would satisfy the financial risk associated with the market value of the equity capitalization. Since the ratesetting process uses a different set of ratios calculated from the book value capitalization, then further analysis is required to synchronize the financial risk of the book capitalization with the required return on the book value of the equity, and to ensure that the utility recovers its total cost of equity. This adjustment is developed through precise mathematical calculations, using well recognized analytical procedures that are widely accepted in the financial literature. To arrive at that return, the rate of return on common equity is the unleveraged cost of capital (or equity return at 100% equity) plus one or more terms reflecting the increase in financial risk resulting from the use of leverage in the capital structure. Multiple terms are used in the case of debt and preferred stock.

Q. Are there specific factors that influence market-to-book ratios that determine whether the leverage adjustment should be made?

A. No, there are not. The leverage adjustment is not intended, nor was it designed, to address the reasons that stock prices vary from book value. Hence, any observations concerning market prices relative to book are not on point. The leverage adjustment deals with the issue of financial risk and is not intended to transform the DCF result to a book value return through a market-to-book adjustment. Again, the leverage adjustment that I propose is based on the fundamental financial precept that the cost of equity is equal to the rate of return for an unleveraged firm (i.e., where the overall rate of return equates to the cost of equity with a capital structure that contains 100% equity) plus the additional return required for introducing debt and/or preferred stock leverage into the capital structure.

Further, as noted previously, the high market prices of utility stocks cannot be attributed solely to the notion that these companies are expected to earn a return on equity that differs from its cost of equity. Stock prices above book value are common for utility stocks, and indeed the stock prices of non-regulated companies exceed book values by even greater margins. In this regard, according to the Barron's issue of May 3, 2010, the major market indices' market-to-book ratios are well above 100%. The Dow Jones Utility index traded at a multiple of 1.62 times book value, which is below the market multiple of other indices. For example, the S&P Industrial index was at 3.27 times book value, and the Dow Jones Industrial index was at 4.88 times book value. It is difficult to accept that the vast majority of

all firms operating in our economy are generating returns far in excess of their cost of capital. Certainly, in our free-market economy, competition should contain such excesses if they indeed exist.

Finally, the leverage adjustment adds stability to the final DCF cost rate. That is to say, as the market capitalization increases relative to its book value, the leverage adjustment increases while the simple yield (*D/P*) plus growth (*g*) result declines. The reverse is also true that when the market capitalization declines, the leverage adjustment also declines as the simple yield (*D/P*) plus growth (*g*) result increases.

Q. How is the DCF-determined cost of equity adjusted for the financial risk associated with the book value of the capitalization?

A. In pioneering work, Nobel laureates Modigliani and Miller developed several theories about the role of leverage in a firm's capital structure. As part of that work, Modigliani and Miller established that, as the borrowing of a firm increases, the expected return on stockholders' equity also increases.[2] This principle is incorporated into my leverage adjustment which recognizes that the expected return on equity increases to reflect the increased risk associated with the higher financial leverage shown by the book value capital structure, as compared to the market value capital structure that contains lower financial risk. Modigliani and Miller proposed several approaches to quantify the equity return associated with various

[2] Modigliani, F. and Miller, M.H. The Cost of Capital, Corporation Finance, and the Theory of Investments. American Economic Review, June 1958, 261-297.

Modigliani, F. and Miller, M. H. Taxes and the Cost of Capital: A Correction. American Economic Review, June 1963, 433-443.

degrees of debt leverage in a firm's capital structure. These formulas point toward an increase in the equity return associated with the higher financial risk of the book value capital structure. The leverage adjustment expresses the cost of equity as the unleveraged return plus compensation for the additional risk of introducing debt and/or preferred stock into the capital structure. There can be no dispute that a firm's financial risk varies with the relative amount of leverage contained in its capital structure. As detailed in Appendix E, the Modigliani and Miller theory when applied to the Electric Group shows that the cost of equity increases by 0.41% (11.30% - 10.89%) when the book value of equity, rather than the market value of equity, is used for ratesetting purposes.

Q. Please provide the DCF return based upon your preceding discussion of dividend yield, growth, and leverage.

A. As explained previously, I have utilized a six-month average dividend yield (D_1/P_0) adjusted in a forward-looking manner for my DCF calculation. This dividend yield is used in conjunction with the growth rate (g) previously developed. The DCF also includes the leverage modification (*lev.*) required when the book value equity ratio is used in determining the weighted average cost of capital in the ratesetting process rather than the market value equity ratio related to the price of stock.

	D_1/P_0	+	g	+	*lev.*	=	k
Electric Group	5.39%	+	5.50%	+	0.41%	=	11.30%

The DCF result shown above represents the simplified (i.e., Gordon) form of the model that contains a constant growth assumption. I should reiterate, however, that

the DCF indicated cost rate provides an explanation of the rate of return on common stock market prices without regard to the prospect of a change in the price-earnings multiple. An assumption that there will be no change in the price-earnings multiple is not supported by the realities of the equity market, because price-earnings multiples do not remain constant. This is one of the constraints of this model that makes it important to consider other model results when determining a company's cost of equity.

Q. Is your leverage adjustment designed to transform the market return into one that is designed to produce a particular market-to-book ratio?

A. No, it is not. The adjustment that I label as a leverage adjustment is merely a convenient way of showing the amount that must be added to (or subtracted from) the result of the simple DCF model (i.e., $D/P + g$), in the context of a return that applies to the capital structure used in ratemaking, which is computed with book value weights rather than market value weights, in order to arrive at the utility's total cost of equity. I specify a separate factor, which I call the leverage adjustment, but there is no need to do so other than providing identification for this factor. If I expressed my return solely in the context of the book value weights that we use to calculate the weighted average cost of capital, and ignore the familiar $D/P + g$ expression entirely, then there would be no separate element to reflect the financial leverage change from market value to book value capitalization. This is because the equity return applicable to the book value common equity ratio is equal to 8.96%, which is the return for the Electric Group applicable to its equity with no debt in its capital structure (i.e., the cost of capital is equal to the cost of equity with

a 100% equity ratio) plus 2.27% compensation for having a 51.89% debt ratio, plus 0.07% for having a 1.08% preferred stock ratio (see pages E-11 and E-12 of Appendix E). The sum of the parts is 11.30% (8.96% + 2.27% + 0.07%) and there is no need to even address the cost of equity in terms of $D/P + g$. To express this same return in the context of the familiar DCF model, I summed the 5.39% dividend yield, the 5.50% growth rate, and the 0.41% for the leverage adjustment in order to arrive at the same 11.30% (5.39% + 5.50% + 0.41%) return. I know of no means to mathematically solve for the 0.41% leverage adjustment by expressing it in the terms of any particular relationship of market price to book value. The 0.41% adjustment is merely a convenient way to compare the 11.30% return computed directly with the Modigliani & Miller formulas to the 10.89% return generated by the DCF model based on a market value capital structure. My point is that when we use a market-determined cost of equity developed from the DCF model, it reflects a level of financial risk that is different (in this case, lower) from the capital structure stated at book value. This process has nothing to do with targeting any particular market-to-book ratio.

RISK PREMIUM ANALYSIS

Q. Please describe your use of the risk premium approach to determine the cost of equity.

A. The details of my use of the Risk Premium approach and the evidence in support of my conclusions are set forth in Appendix G. I will summarize them here. With this method, the cost of equity capital is determined by corporate bond yields plus a premium to account for the fact that common equity is exposed to greater

investment risk than debt capital. As with other models of the cost of equity, the Risk Premium approach has its limitations, including potential imprecision in the assessment of the future cost of corporate debt and the measurement of the risk-adjusted common equity premium. Therefore, the results of the Risk Premium approach should be used in conjunction with the results of other methods.

Q. What long-term public utility debt cost rate did you use in your risk premium analysis?

A. In my opinion, a 6.00% yield represents a reasonable estimate of the prospective yield on long-term A-rated public utility bonds. The Moody's index and the Blue Chip forecasts support this figure. The historical yields for long-term public utility debt are shown graphically on page 1 of Schedule 11. For the twelve months ended April 2010, the average monthly yield on Moody's A-rated index of public utility bonds was 5.85%. For the six and three-month periods ended April 2010, the yields were 5.79% and 5.84%, respectively. During the twelve-months ended April 2010, the range of the yields on A-rated public utility bonds was 5.53% to 6.49%.

Q. What forecasts of interest rates have you considered in your analysis?

A. I have determined the prospective yield on A-rated public utility debt by using the Blue Chip Financial Forecasts ("Blue Chip") along with the spread in the yields that I describe above and in Appendix F. The Blue Chip is a reliable authority and contains consensus forecasts of a variety of interest rates compiled from a panel of banking, brokerage, and investment advisory services. In early 1999, Blue Chip stopped publishing forecasts of yields on A-rated public utility bonds because the Federal Reserve deleted these yields from its Statistical Release H.15. To

independently project a forecast of the yields on A-rated public utility bonds, I have combined the forecast yields on long-term Treasury bonds published on May 1, 2010, and a yield spread of 1.25%. As shown on page 5 of Schedule 11, A-rated public utility bonds have yielded more than Treasury bonds by 1.48% as the twelve-month average, 1.35% as the six-month average, and 1.34% as the three-month average. From these averages, 1.25% represents a reasonable spread for the yield on A-rated public utility bonds over Treasury bonds. For comparative purposes, I also have shown the Blue Chip forecasts of Aaa-rated and Baa-rated corporate bonds. These forecasts are:

		Blue Chip Financial Forecasts				
		Corporate		30-Year	A-rated Public Utility	
Year	Quarter	Aaa-rated	Baa-rated	Treasury	Spread	Yield
2010	2nd	5.3%	6.3%	4.7%	1.25%	5.95%
2010	3rd	5.5%	6.5%	4.8%	1.25%	6.05%
2010	4th	5.6%	6.6%	5.0%	1.25%	6.25%
2011	1st	5.7%	6.8%	5.1%	1.25%	6.35%
2011	2nd	5.9%	6.9%	5.2%	1.25%	6.45%
2011	3rd	6.0%	7.0%	5.3%	1.25%	6.55%

Q. Are there additional forecasts of interest rates that extend beyond those shown above?

A. Yes, there are. Twice yearly, Blue Chip provides long-term forecasts of interest rates. In its December 1, 2009 publication, Blue Chip published forecasts of interest rates as follows:

	Blue Chip Financial Forecasts		
	Corporate		30-Year
Averages	Aaa-rated	Baa-rated	Treasury
2011-15	6.4%	7.5%	5.6%
2016-20	6.8%	7.8%	5.9%

Given these forecasted interest rates, a 6.00% yield on A-rated public utility bonds represents a reasonable and conservative expectation of the interest rates that will be in effect during the rate effective period.

Q. What equity risk premium have you determined for public utilities?

A. Appendix G provides a discussion of the financial returns that I relied upon to develop the appropriate equity risk premium for the S&P Public Utilities. I have calculated the equity risk premium by comparing the market returns on utility stocks and the market returns on utility bonds. I chose the S&P Public Utility index for the purpose of measuring the market returns for utility stocks. The S&P Public Utility index is reflective of the risk associated with regulated utilities, rather than the broader market indexes, such as the S&P 500 Composite index, of which the S&P Public Utility index is a subset. Use of the S&P Public Utility index reduces the role of judgment in establishing the risk premium for public utilities. With the equity risk premiums developed for the S&P Public Utilities as a base, I derived the equity risk premium for the Electric Group.

Q. What equity risk premium for the S&P Public Utilities have you determined for this case?

A. To develop an appropriate risk premium, I analyzed the results for the S&P Public Utilities by averaging (i) the midpoint of the range shown by the geometric mean

and median and (ii) the arithmetic mean. This procedure has been employed to provide a comprehensive way of measuring the central tendency of the historical returns. As shown by the values set forth on page 2 of Schedule 12, the indicated risk premiums for the various time periods analyzed are 5.51% (1928-2007), 6.58% (1952-2007), 6.08% (1974-2007), and 6.37% (1979-2007). The selection of the shorter periods taken from the entire historical series is designed to provide a risk premium that conforms more nearly to present investment fundamentals, and removes some of the more distant data from the analysis.

Q. Do you have further support for the selection of the time periods used in your equity risk premium determination?

A. Yes, I do. First, the terminal year of my analysis presented in Schedule 12 represents the returns realized through 2007. An update to 2008 has not been prepared because of the difficulty obtaining the return on public utility bonds from Lehman Brothers, which is in bankruptcy. Second, the selection of the initial year of each period was based upon the financial market defining events that I note here and describe in Appendix G. These events were fixed in history and cannot be manipulated as later financial data becomes available. That is to say, using the Treasury-Federal Reserve Accord as a defining event, the year 1952 is fixed as the beginning point for the measurement period regardless of the financial results that subsequently occurred. Likewise, 1974 represented a benchmark year because it followed the 1973 Arab Oil embargo. Also, the year 1979 was chosen because it began the deregulation of the financial markets. I consistently use these periods in my work, and additional data are merely added to the earlier results when they

become available. The periods chosen are therefore not driven by the desired results of the study.

Q. What conclusions have you drawn from these data?

A. Using the summary values provided on page 2 of Schedule 12, the 1928-2007 period provides the lowest indicated risk premium, while the 1952-2007 period provides the highest risk premium for the S&P Public Utilities. Within these bounds, a common equity risk premium of 6.23% (6.08% + 6.37% = 12.45% ÷ 2) is derived by averaging data covering the periods 1974-2007 and 1979-2007. Therefore, 6.23% represents a reasonable risk premium for the S&P Public Utilities in this case.

As noted earlier in my fundamental risk analysis, differences in risk characteristics must be taken into account when applying the results for the S&P Public Utilities to the Electric Group. I recognized these differences in the development of the equity risk premium in this case. I previously enumerated various differences in fundamentals between the Electric Group and the S&P Public Utilities, including size, market ratios, common equity ratio, return on book equity, operating ratios, coverage, quality of earnings, internally generated funds, and betas. In my opinion, these differences indicate that 5.50% represents a reasonable common equity risk premium in this case. This represents approximately 88% (5.50% ÷ 6.23% = 0.88) of the risk premium of the S&P Public Utilities and is reflective of the risk of the Electric Group compared to the S&P Public Utilities.

Q. What common equity cost rate did you determine based on your risk premium analysis?

A. The cost of equity (i.e., *k*) is represented by the sum of the prospective yield for long-term public utility debt (i.e., *i*), and the equity risk premium (i.e., *RP*). The Risk Premium approach provides a cost of equity of:

	i	+	*RP*	=	*k*
Combination Group	6.00%	+	5.50%	=	11.50%

CAPITAL ASSET PRICING MODEL

Q. Have you used the Capital Asset Pricing Model to measure the cost of equity in this case?

A. Yes. As with other models of the cost of equity, the CAPM contains a variety of assumptions and shortcomings that I discuss in Appendix H. Therefore, this method should be used in conjunction with other methods to measure the cost of equity, as each will complement the other and will provide a result that will help reduce the unavoidable defects found in each method.

Q. What are the features of the CAPM as you have used it?

A. The CAPM uses the yield on a risk-free interest bearing obligation plus a rate of return premium that is proportional to the systematic risk of an investment. The details of my use of the CAPM and evidence in support of my conclusions are set forth in Appendix H. To compute the cost of equity with the CAPM, three components are necessary: a risk-free rate of return (*Rf*), the beta measure of systematic risk (β), and the market risk premium (*Rm-Rf*) derived from the total return on the market of equities reduced by the risk-free rate of return. The CAPM specifically accounts for differences in systematic risk (i.e., market risk as measured

by the beta) between an individual firm or group of firms and the entire market of equities. As such, to calculate the CAPM it is necessary to employ firms with traded stocks. In this regard, I performed a CAPM calculation for the Electric Group. In contrast, my Risk Premium approach also considers industry- and company-specific factors because it is not limited to measuring only systematic risk. As a consequence, the Risk Premium approach is more comprehensive than the CAPM. In addition, the Risk Premium approach provides a better measure of the cost of equity because it is founded upon the yields on corporate bonds rather than Treasury bonds.

Q. What betas have you considered in the CAPM?

A. For my CAPM analysis, I initially considered the Value Line betas. As shown on page 1 of Schedule 13, the average beta is 0.70 for the Electric Group.

Q. What betas have you used in the CAPM determined cost of equity?

A. The betas must be reflective of the financial risk associated with the ratesetting capital structure that is measured at book value. Therefore, Value Line betas cannot be used directly in the CAPM, unless those betas are applied to a capital structure measured with market values. To develop a CAPM cost rate applicable to a book value capital structure, the Value Line (market value) betas have been unleveraged and releveraged for the book value common equity ratios using the Hamada formula, as follows:

$$\beta l = \beta u \, [1 + (1 - t) \, D/E + P/E]$$

where βl = the leveraged beta, βu = the unleveraged beta, t = income tax rate, D = debt ratio, P = preferred stock ratio, and E = common equity ratio. The betas

published by Value Line have been calculated with the market price of stock and therefore are related to the market value capitalization. By using the formula shown above and the capital structure ratios measured at market value, the beta would become 0.44 for the Electric Group if it employed no leverage and was 100% equity financed. With the unleveraged beta as a base, I calculated the leveraged beta of 0.77 for the book value capital structure of the Electric Group. The betas and corresponding common equity ratios are:

Market Values		Book Values	
Beta	Common Equity Ratio	Beta	Common Equity Ratio
0.70	51.88%	0.77	47.03%

The book value leveraged beta that I will employ in the CAPM cost of equity is 0.77 for the Electric Group.

Q. What risk-free rate have you used in the CAPM?

A. For reasons explained in Appendix F, I have considered the yields on 20-year Treasury bonds using historical data. I have also considered forecasts of the yields on 30-year Treasury bonds that are published by Blue Chip. The reason that I used the 20-year Treasury yield in my historical analysis relates to the interruption in the 30-year series, which had no data reported for the 47-months of March 2002 to January 2006. As shown on pages 2 and 3 of Schedule 13, I provided the historical yields on Treasury notes and bonds. For the twelve months ended April 2010, the average yield was 4.37%, as shown on page 3 of that schedule. For the six- and three-months ended April 2010, the yields on 20-year Treasury bonds were 4.44% and 4.50%, respectively. During the twelve-months ended April 2010, the range of

the yields on 20-year Treasury bonds was 4.14% to 4.53%. As shown on page 4 of Schedule 13, forecasts published by Blue Chip on May 1, 2010 indicate that the yields on long-term Treasury bonds are expected to be in the range of 4.7% to 5.3% during the next six quarters. The longer term forecasts described previously (see Blue Chip Financial Forecast presented earlier) show that the yields on 30-year Treasury bonds will average 5.6% from 2011 through 2015 and 5.9% for 2016 to 2020. For reasons explained previously, forecasts of interest rates should be emphasized at this time in selecting the risk-free rate of return in CAPM. Hence, I have used a 4.75% risk-free rate of return for CAPM purposes, which considers not only the Blue Chip forecasts, but also the recent trend in the yields on long-term Treasury bonds.

Q. What market premium have you used in the CAPM?

A. As shown in Appendix H, the market premium is derived from the SBBI Classic Yearbook (i.e., 6.05%) and the Value Line and S&P 500 returns (i.e., 8.05%). For the historically based market premium, I have used the arithmetic mean. The market premium as averaged from these sources equals 7.05% (6.05% + 8.05% = 14.10% ÷ 2).

Q. Are there adjustments to the CAPM results that are necessary to fully reflect the rate of return on common equity?

A. Yes, there are. The technical literature supports an adjustment relating to the size of a company or portfolio for which the CAPM calculation is performed. Generally, the smaller the firm the higher its risk and, therefore, its required return increases. Moreover, in his discussion of the cost of capital, Professor Brigham has indicated

that smaller firms have higher capital costs than otherwise similar larger firms (see Fundamentals of Financial Management, fifth edition, page 623). Also, the Fama/French study (see The Cross-Section of Expected Stock Returns; The Journal of Finance, June 1992) established that the size of a firm helps explain stock returns. In an October 15, 1995 article in Public Utility Fortnightly, entitled Equity and the Small-Stock Effect, it was demonstrated that the CAPM can significantly understate a smaller firm's cost of equity. Indeed, it was demonstrated in the SBBI Yearbook that the returns for stocks in lower deciles (i.e., smaller stocks) had returns in excess of those shown by the simple CAPM. In this regard, the Electric Group has a market-based average equity capitalization of $3.7 billion. For my CAPM analysis, I have adopted a mid-cap adjustment of 0.94%.

Q. What CAPM result have you determined?

A. Using the 4.75% risk-free rate of return, the leverage adjusted beta of 0.77 for the Electric Group, the 7.05% market premium, and the 0.94% size adjustment, I derived the following CAPM-indicated cost of equity:

	$Rf + (\beta \times (Rm-Rf)) + size = k$
Electric Group	4.75% + (0.77 x (7.05%)) + 0.94% = 11.12%

COMPARABLE EARNINGS APPROACH

Q. How have you applied the Comparable Earnings approach in this case?

A. The technical aspects of the Comparable Earnings approach are set forth in Appendix I. Because regulation is a substitute for competitively-determined prices, the returns realized by non-regulated firms with comparable risks to a public utility

provide useful insight into a fair rate of return. In order to identify the appropriate return, it is necessary to analyze returns earned (or realized) by other firms within the context of the Comparable Earnings standard. The firms selected for the Comparable Earnings approach should be companies whose prices are not subject to cost-based price ceilings (i.e., non-regulated firms) so that circularity is avoided. There are two avenues available to implement the Comparable Earnings approach. One method would involve the selection of another industry (or industries) with comparable risks to the public utility in question, and the results for all companies within that industry would serve as a benchmark. The second approach requires the selection of parameters that represent similar risk traits for the public utility and the comparable risk companies. Using this approach, the business lines of the comparable companies become unimportant. The latter approach is preferable with the further qualification that the comparable risk companies exclude regulated firms in order to avoid the circular reasoning implicit in the use of the achieved earnings/book ratios of other regulated firms. The United States Supreme Court has held that:

> A public utility is entitled to such rates as will permit it to earn a return on the value of the property which it employs for the convenience of the public equal to that generally being made at the same time and in the same general part of the country on investments in other business undertakings which are attended by corresponding risks and uncertainties.... The return should be reasonably sufficient to assure confidence in the financial soundness of the utility and should be adequate, under efficient and economical management, to maintain and support its credit and enable it to raise the money necessary for the proper discharge of its public duties. Bluefield Water Works vs. Public Service Commission, 262 U.S. 668 (1923).

Therefore, it is important to identify the returns earned by firms that compete for capital with a public utility. This can be accomplished by analyzing the returns of non-regulated firms that are subject to the competitive forces of the marketplace.

Q. How have you implemented the Comparable Earnings approach?

A. I selected non-regulated companies from the Value Line Investment Survey for Windows that have six categories (see Appendix I for definitions) of comparability of risk to the Electric Group. These screening criteria were based upon the range as defined by the rankings of the companies in the Electric Group. The items considered were: Timeliness Rank, Safety Rank, Financial Strength, Price Stability, Value Line betas, and Technical Rank. The identities of the companies comprising the Comparable Earnings group and their associated rankings within the ranges are identified on page 1 of Schedule 14.

Value Line data was relied upon because it provides a comprehensive basis for evaluating the risks of the comparable firms. As to the returns calculated by Value Line for these companies, there is some downward bias in the figures shown on page 2 of Schedule 14, because Value Line computes the returns on year-end rather than average book value. If average book values had been employed, the rates of return would have been slightly higher. Nevertheless, these are the returns considered by investors when taking positions in these stocks. Because many of the comparability factors, as well as the published returns, are used by investors in selecting stocks, and to the extent that investors rely on the Value Line service to gauge returns, it is, therefore, an appropriate database for measuring comparable return opportunities.

Q. What data have you used in your Comparable Earnings analysis?

A. I have used both historical realized returns and forecasted returns for non-utility companies. As noted previously, I have not used returns for utility companies in order to avoid the circularity that arises from using regulatory-influenced returns to determine a regulated return. It is appropriate to consider a relatively long measurement period in the Comparable Earnings approach in order to cover conditions over an entire business cycle. A ten-year period (5 historical years and 5 projected years) is sufficient to cover an average business cycle. Unlike the DCF and CAPM, the results of the Comparable Earnings method can be applied directly to the book value capitalization. In other words, the Comparable Earnings approach does not contain the potential misspecification contained in market models when the market capitalization and book value capitalization diverge significantly. The historical rate of return on book common equity was 13.0% as shown on page 2 of Schedule 14. The forecast rate of return, as published by Value Line, approximates 12.9%, as indicated on page 2 of Schedule 14.

Q. What rate of return on common equity have you determined in this case using the Comparable Earnings approach?

A. The average of the historical and forecast median rates of return is:

	Historical	*Forecast*	*Average*
Comparable Earnings Group	13.0%	12.9%	12.95%

As noted previously, I have used the results from the Comparable Earnings method to confirm the results of the market-based models.

CONCLUSION ON COST OF EQUITY

Q. What is your conclusion concerning Duquesne Light's cost of common equity?

A. Based upon the application of the variety of methods and models described previously, I recommend that the Commission set the Company's rate of return on common equity within the range of 11.25% to 11.75%. In recognition of the customer impact of the proposed rate increase, the Company has selected 11.25%, i.e. the low end of my range. My cost of equity recommendation makes no provision for the prospect that the rate of return may not be achieved due to attrition and/or other unforeseen events.

Q. Does this conclude your direct testimony at this time?

A. Yes, it does.

DUQUESNE LIGHT COMPANY

Appendices A through I
To Accompany the

Direct Testimony

of

Paul R. Moul
Managing Consultant
P. Moul & Associates

Concerning
Rate of Return

APPENDIX A TO DIRECT TESTIMONY OF PAUL R. MOUL

EDUCATIONAL BACKGROUND, BUSINESS EXPERIENCE AND QUALIFICATIONS

I was awarded a degree of Bachelor of Science in Business Administration by Drexel University in 1971. While at Drexel, I participated in the Cooperative Education Program which included employment, for one year, with American Water Works Service Company, Inc., as an internal auditor, where I was involved in the audits of several operating water companies of the American Water Works System and participated in the preparation of annual reports to regulatory agencies and assisted in other general accounting matters.

Upon graduation from Drexel University, I was employed by American Water Works Service Company, Inc., in the Eastern Regional Treasury Department where my duties included preparation of rate case exhibits for submission to regulatory agencies, as well as responsibility for various treasury functions of the thirteen New England operating subsidiaries.

In 1973, I joined the Municipal Financial Services Department of Betz Environmental Engineers, a consulting engineering firm, where I specialized in financial studies for municipal water and wastewater systems.

In 1974, I joined Associated Utility Services, Inc., now known as AUS Consultants. I held various positions with the Utility Services Group of AUS Consultants, concluding my employment there as a Senior Vice President.

In 1994, I formed P. Moul & Associates, an independent financial and regulatory consulting firm. In my capacity as Managing Consultant and for the past twenty-nine years, I have continuously studied the rate of return requirements for cost of service-regulated firms. In this regard, I have supervised the preparation of rate of return studies, which were

employed, in connection with my testimony and in the past for other individuals. I have presented direct testimony on the subject of fair rate of return, evaluated rate of return testimony of other witnesses, and presented rebuttal testimony.

My studies and prepared direct testimony have been presented before thirty-six (36) federal, state and municipal regulatory commissions, consisting of: the Federal Energy Regulatory Commission; state public utility commissions in Alabama, Alaska, California, Colorado, Connecticut, Delaware, Florida, Georgia, Hawaii, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, New Hampshire, New Jersey, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Virginia, West Virginia, Wisconsin, and the Philadelphia Gas Commission. My testimony has been offered in over 200 rate cases involving electric power, natural gas distribution and transmission, resource recovery, solid waste collection and disposal, telephone, wastewater, and water service utility companies. While my testimony has involved principally fair rate of return and financial matters, I have also testified on capital allocations, capital recovery, cash working capital, income taxes, factoring of accounts receivable, and take-or-pay expense recovery. My testimony has been offered on behalf of municipal and investor-owned public utilities and for the staff of a regulatory commission. I have also testified at an Executive Session of the State of New Jersey Commission of Investigation concerning the BPU regulation of solid waste collection and disposal.

I was a co-author of a verified statement submitted to the Interstate Commerce Commission concerning the 1983 Railroad Cost of Capital (Ex Parte No. 452). I was also co-author of comments submitted to the Federal Energy Regulatory Commission regarding

the Generic Determination of Rate of Return on Common Equity for Public Utilities in 1985, 1986 and 1987 (Docket Nos. RM85-19-000, RM86-12-000, RM87-35-000 and RM88-25-000). Further, I have been the consultant to the New York Chapter of the National Association of Water Companies, which represented the water utility group in the Proceeding on Motion of the Commission to Consider Financial Regulatory Policies for New York Utilities (Case 91-M-0509). I have also submitted comments to the Federal Energy Regulatory Commission in its Notice of Proposed Rulemaking (Docket No. RM99-2-000) concerning Regional Transmission Organizations and on behalf of the Edison Electric Institute in its intervention in the case of Southern California Edison Company (Docket No. ER97-2355-000). Also, I was a member of the panel of participants at the Technical Conference in Docket No. PL07-2 on the Composition of Proxy Groups for Determining Gas and Oil Pipeline Return on Equity.

In late 1978, I arranged for the private placement of bonds on behalf of an investor-owned public utility. I have assisted in the preparation of a report to the Delaware Public Service Commission relative to the operations of the Lincoln and Ellendale Electric Company. I was also engaged by the Delaware P.S.C. to review and report on the proposed financing and disposition of certain assets of Sussex Shores Water Company (P.S.C. Docket Nos. 24-79 and 47-79). I was a co-author of a Report on Proposed Mandatory Solid Waste Collection Ordinance prepared for the Board of County Commissioners of Collier County, Florida.

I have been a consultant to the Bucks County Water and Sewer Authority concerning rates and charges for wholesale contract service with the City of Philadelphia. My municipal consulting experience also included an assignment for Baltimore County, Maryland,

regarding the City/County Water Agreement for Metropolitan District customers (Circuit Court for Baltimore County in Case 34/153/87-CSP-2636).

I am a member of the Society of Utility and Regulatory Financial Analysis (formerly the National Society of Rate of Return Analysts) and have attended several Financial Forums sponsored by the Society. I attended the first National Regulatory Conference at the Marshall-Wythe School of Law, College of William and Mary. I also attended an Executive Seminar sponsored by the Colgate Darden Graduate Business School of the University of Virginia concerning Regulated Utility Cost of Equity and the Capital Asset Pricing Model. In October 1984, I attended a Standard & Poor's Seminar on the Approach to Municipal Utility Ratings, and in May 1985, I attended an S&P Seminar on Telecommunications Ratings.

My lecture and speaking engagements include:

Date	Occasion	Sponsor
April 2006	Thirty-eighth Financial Forum	Society of Utility & Regulatory Financial Analysts
April 2001	Thirty-third Financial Forum	Society of Utility & Regulatory Financial Analysts
December 2000	Pennsylvania Public Utility Law Conference: Non-traditional Players in the Water Industry	Pennsylvania Bar Institute
July 2000	EEI Member Workshop Developing Incentives Rates: Application and Problems	Edison Electric Institute
February 2000	The Sixth Annual FERC Briefing	Exnet and Bruder, Gentile & Marcoux, LLP
March 1994	Seventh Annual Proceeding	Electric Utility Business Environment Conf.
May 1993	Financial School	New England Gas Assoc.
April 1993	Twenty-Fifth Financial Forum	National Society of Rate of Return Analysts

APPENDIX A TO DIRECT TESTIMONY OF PAUL R. MOUL

June 1992	Rate and Charges Subcommittee Annual Conference	American Water Works Association
May 1992	Rates School	New England Gas Assoc.
October 1989	Seventeenth Annual Eastern Utility Rate Seminar	Water Committee of the National Association of Regulatory Utility Commissioners Florida Public Service Commission and University of Utah
October 1988	Sixteenth Annual Eastern Utility Rate Seminar	Water Committee of the National Association of Regulatory Utility Commissioners, Florida Public Service Commission and University of Utah
May 1988	Twentieth Financial Forum	National Society of Rate of Return Analysts
October 1987	Fifteenth Annual Eastern Utility Rate Seminar	Water Committee of the National Association of Regulatory Utility Commissioners, Florida Public Service Commission and University of Utah
September 1987	Rate Committee Meeting	American Gas Association
May 1987	Pennsylvania Chapter annual meeting	National Association of Water Companies
October 1986	Eighteenth Financial Forum	National Society of Rate of Return
October 1984	Fifth National on Utility Ratemaking Fundamentals	American Bar Association
March 1984	Management Seminar	New York State Telephone Association
February 1983	The Cost of Capital Seminar	Temple University, School of Business Admin.

May 1982	A Seminar on Regulation and The Cost of Capital	New Mexico State University, Center for Business Research and Services
October 1979	Economics of Regulation	Brown University

APPENDIX B TO DIRECT TESTIMONY OF PAUL R. MOUL

RATESETTING PRINCIPLES

Traditional cost of service regulation, as implemented by a regulatory agency engaged in ratesetting, such as the Commission, serves as a substitute for competition. In setting rates, a regulatory agency must carefully consider the public's interest in reasonably priced, as well as safe and reliable, service. The level of rates must also provide the public utility and its investors with an opportunity to earn a rate of return for the public utility and its investors that is commensurate with the risk to which the invested capital is exposed so that the public utility has access to the capital required to meet its service responsibilities to its customers. Without an opportunity to earn a fair rate of return, a public utility will be unable to attract sufficient capital required to meet its responsibilities over time.

It is important to remember that regulated firms must compete for capital in a global market with non-regulated firms, as well as municipal, state and federal governments. Traditionally, a public utility has been responsible for providing a particular type of service to its customers within a specific market area. Although this relationship with customers has been changing, a regulated utility remains quite different from a non-regulated firm, which is free to enter and exit competitive markets in accordance with available business opportunities.

As established by the landmark Bluefield and Hope cases,[1] several tests have been articulated through which the regulator can determine the fairness or reasonableness of the rate of return. These tests include a determination of whether the rate of return is (i) similar to that of other financially sound businesses having similar or comparable risks, (ii) sufficient to ensure confidence in the financial integrity of the public utility, and (iii) adequate to maintain

[1] Bluefield Water Works & Improvement Co. v. P.S.C. of West Virginia, 262 U.S. 679 (1923) and F.P.C. v. Hope Natural Gas Co., 320 U.S. 591 (1944).

and support the credit of the utility, thereby enabling it to attract, on a reasonable cost basis, the funds necessary to satisfy its capital requirements so that it can meet the obligation to provide adequate and reliable service to the public.

A fair rate of return must not only provide the utility with the ability to attract new capital it must also be fair to existing investors. An appropriate rate of return which may have been reasonable at one point in time may become too high or too low at a subsequent point in time, based upon changing business risks, economic conditions and alternative investment opportunities. When applying the standards of a fair rate of return, it must be recognized that the end result must provide for the payment of interest on the company's debt, the payment of dividends on the company's stock, the recovery of costs associated with securing capital, the maintenance of reasonable credit quality for the company, and support of the company's financial condition, which today would include those measures of financial performance in the areas of interest coverage and adequate cash flow derived from a reasonable level of earnings.

APPENDIX C TO DIRECT TESTIMONY OF PAUL R. MOUL

EVALUATION OF RISK

The rate of return required by investors is directly linked to the perceived level of risk. The greater the risk of an investment, the higher is the required rate of return necessary to compensate for that risk all else being equal. Because investors will seek the highest rate of return available, considering the risk involved, the rate of return must at least equal the investor-required, market-determined cost of capital if public utilities are to attract the necessary investment capital on reasonable terms.

In the measurement of the cost of capital, it is necessary to assess the risk of a firm. The level of risk for a firm is often defined as the uncertainty of achieving expected performance, and is sometimes viewed as a probability distribution of possible outcomes. Hence, if the uncertainty of achieving an expected outcome is high, the risk is also high. As a consequence, high risk firms must offer investors higher returns than low risk firms, which pay less to attract capital from investors. This is because the level of uncertainty, or risk of not realizing expected returns, establishes the compensation required by investors in the capital markets. Of course, the risk of a firm must also be considered in the context of its ability to actually experience adequate earnings, which conform with a fair rate of return. Thus, if there is a high probability that a firm will not perform well due to fundamentally poor market conditions, investors will demand a higher return.

The investment risk of a firm is comprised of its business risk and financial risk. Business risk is all risk other than financial risk, and is sometimes defined as the staying power of the market demand for a firm's product or service and the resulting inherent uncertainty of realizing expected pre-tax returns on the firm's assets. Business risk encompasses all operating factors, e.g., productivity, competition, management ability, etc. that bear upon the expected

pre-tax operating income attributed to the fundamental nature of a firm's business. Financial risk results from a firm's use of borrowed funds (or similar sources of capital with fixed payments) in its capital structure, i.e., financial leverage. Thus, if a firm did not employ financial leverage by borrowing any capital, its investment risk would be represented by its business risk.

It is important to note that in evaluating the risk of regulated companies, financial leverage cannot be considered in the same context as it is for non-regulated companies. Financial leverage has a different meaning for regulated firms than for non-regulated companies. For regulated public utilities, the cost of service formula gives the benefits of financial leverage to consumers in the form of lower revenue requirements. For non-regulated companies, all benefits of financial leverage are retained by the common stockholder. Although retaining none of the benefits, regulated firms bear the risk of financial leverage. Therefore, a regulated firm's rate of return on common equity must recognize the greater financial risk shown by the higher leverage typically employed by public utilities.

Although no single index or group of indices can precisely quantify the relative investment risk of a firm, financial analysts use a variety of indicators to assess that risk. For example, the creditworthiness of a firm is revealed by its bond ratings. If the stock is traded, the price-earnings multiple, dividend yield, and beta coefficients (a statistical measure of a stock's relative volatility to the rest of the market) provide some gauge of overall risk. Other indicators, which are reflective of business risk, include the variability of the rate of return on equity, which is indicative of the uncertainty of actually achieving the expected earnings; operating ratios (the percentage of revenues consumed by operating expenses, depreciation, and taxes other than income tax), which are indicative of profitability; the quality of earnings,

which considers the degree to which earnings are the product of accounting principles or cost deferrals; and the level of internally generated funds. Similarly, the proportion of senior capital in a company's capitalization is the measure of financial risk, which is often analyzed in the context of the equity ratio (i.e., the complement of the debt ratio).

APPENDIX D TO DIRECT TESTIMONY OF PAUL R. MOUL

COST OF EQUITY--GENERAL APPROACH

Through a fundamental financial analysis, the relative risk of a firm must be established prior to the determination of its cost of equity. Any rate of return recommendation, which lacks such a basis, will inevitably fail to provide a utility with a fair rate of return except by coincidence. With a fundamental risk analysis as a foundation, standard financial models can be employed by using informed judgment. The methods, which have been employed to measure the cost of equity, include: the Discounted Cash Flow ("DCF") model, the Risk Premium ("RP") approach, the Capital Asset Pricing Model ("CAPM") and the Comparable Earnings ("CE") approach.

The traditional DCF model, while useful in providing some insight into the cost of equity, is not an approach that should be used exclusively. The divergence of stock prices from company-specific fundamentals can provide a misleading cost of equity calculation. As reported in The Wall Street Journal on June 6, 1991, a statistical study published by Goldman Sachs indicated that only 35% of stock price growth in the 1980's could be attributed to earnings and interest rates. Further, 38% of the rise in stock prices during the 1980's was attributed to unknown factors. The Goldman Sachs study highlights the serious limitations of a model, such as DCF, which is founded upon identification of specific variables to explain stock price growth. That is to say, when stock price growth exceeds growth in a company's earnings per share, models such as DCF will misspecify investor expected returns, which are comprised of capital gains, as well as dividend receipts. As such, a combination of methods should be used to measure the cost of equity.

The Risk Premium analysis is founded upon the prospective cost of long-term debt, i.e., the yield that the public utility must offer to raise long-term debt capital directly from investors. To that yield must be added a risk premium in recognition of the greater risk of common equity over debt. This additional risk is, of course, attributable to the fact that the payment of interest and principal to creditors has priority over the payment of dividends and return of capital to equity investors. Hence, equity investors require a higher rate of return than the yield on long-term corporate bonds.

The CAPM is a model not unlike the traditional Risk Premium. The CAPM employs the yield on a risk-free interest-bearing obligation plus a premium as compensation for risk. Aside from the reliance on the risk-free rate of return, the CAPM gives specific quantification to systematic (or market) risk as measured by beta.

The Comparable Earnings approach measures the returns expected/experienced by other non-regulated firms and has been used extensively in rate of return analysis for over a half century. However, its popularity diminished in the 1970s and 1980s with the popularization of market-based models. Recently, there has been renewed interest in this approach. Indeed, the financial community has expressed the view that the regulatory process must consider the returns, which are being achieved in the non-regulated sector so that public utilities can compete effectively in the capital markets. Indeed, with additional competition being introduced throughout the traditionally regulated public utility industry, returns expected to be realized by non-regulated firms have become increasing relevant in the ratesetting process. The Comparable Earnings approach considers directly those requirements and it fits the established standards for a fair rate of return set forth in the landmark decisions on the issue of rate of return. These decisions require that a fair return for a utility must be equal to that earned by firms of comparable risk.

APPENDIX E TO DIRECT TESTIMONY OF PAUL R. MOUL

DISCOUNTED CASH FLOW ANALYSIS

Discounted Cash Flow ("DCF") theory seeks to explain the value of an economic or financial asset as the present value of future expected cash flows discounted at the appropriate risk-adjusted rate of return. Thus, if $100 is to be received in a single payment 10 years subsequent to the acquisition of an asset, and the appropriate risk-related interest rate is 8%, the present value of the asset would be $46.32 (Value = $100 ÷ $(1.08)^{10}$) arising from the discounted future cash flow. Conversely, knowing the present $46.32 price of an asset (where price = value), the $100 future expected cash flow to be received 10 years hence shows an 8% annual rate of return implicit in the price and future cash flows expected to be received.

In its simplest form, the DCF theory considers the number of years from which the cash flow will be derived and the annual compound interest rate, which reflects the risk or uncertainty, associated with the cash flows. It is appropriate to reiterate that the dollar values to be discounted are future cash flows.

DCF theory is flexible and can be used to estimate value (or price) or the annual required rate of return under a wide variety of conditions. The theory underlying the DCF methodology can be easily illustrated by utilizing the investment horizon associated with a preferred stock not having an annual sinking fund provision. In this case, the investment horizon is infinite, which reflects the perpetuity of a preferred stock. If P represents price, Kp is the required rate of return on a preferred stock, and D is the annual dividend (P and D with time subscripts), the value of a preferred share is equal to the present value of the dividends to be received in the future discounted at the appropriate risk-adjusted interest rate, Kp. In this circumstance:

$$P_0 = \frac{D_1}{(1+Kp)} + \frac{D_2}{(1+Kp)^2} + \frac{D_3}{(1+Kp)^3} + \ldots + \frac{D_n}{(1+Kp)^n}$$

If $D_1 = D_2 = D_3 = \ldots D_n$ as is the case for preferred stock, and n approaches infinity, as is the case for non-callable preferred stock without a sinking fund, then this equation reduces to:

$$P_0 = \frac{D_1}{Kp}$$

This equation can be used to solve for the annual rate of return on a preferred stock when the current price and subsequent annual dividends are known. For example, with D_1 = \$1.00, and P_0 = \$10, then Kp = \$1.00 ÷ \$10, or 10%.

The dividend discount equation, first shown, is the generic DCF valuation model for all equities, both preferred and common. While preferred stock generally pays a constant dividend, permitting the simplification subsequently noted, common stock dividends are not constant. Therefore, absent some other simplifying condition, it is necessary to rely upon the generic form of the DCF. If, however, it is assumed that $D_1, D_2, D_3, \ldots D_n$ are systematically related to one another by a constant growth rate (g), so that $D_0 (1 + g) = D_1$, $D_1 (1 + g) = D_2$, $D_2 (1 + g) = D_3$ and so on approaching infinity, and if Ks (the required rate of return on a common stock) is greater than g, then the DCF equation can be reduced to:

$$P_0 = \frac{D_1}{Ks - g} \quad or \quad P_0 = \frac{D_0(1+g)}{Ks - g}$$

which is the periodic form of the "Gordon" model.[1] Proof of the DCF equation is found in all

[1]Although the popular application of the DCF model is often attributed to the work of Myron J. Gordon in

modern basic finance textbooks. This DCF equation can be easily solved as:

$$Ks = \frac{D_0(1+g)}{P_0} + g$$

which is the periodic form of the Gordon Model commonly applied in estimating equity rates of return in rate cases. When used for this purpose, *Ks* is the annual rate of return on common equity demanded by investors to induce them to hold a firm's common stock. Therefore, the variables D_0, P_0 and g must be estimated in the context of the market for equities, so that the rate of return, which a public utility is permitted the opportunity to earn, has meaning and reflects the investor-required cost rate.

Application of the Gordon model with market derived variables is straightforward. For example, using the most recent prior annualized dividend (D_0) of $0.80, the current price (P_0) of $10.00, and the investor expected dividend growth rate (g) of 5%, the solution of the DCF formula provides a 13.4% rate of return. The dividend yield component in this instance is 8.4%, and the capital gain component is 5%, which together represent the total 13.4% annual rate of return required by investors. The capital gain component of the total return may be calculated with two adjacent future year prices. For example, in the eleventh year of the holding period, the price per share would be $17.10 as compared with the price per share of $16.29 in the tenth year which demonstrates the 5% annual capital gain yield.

Some DCF devotees believe that it is more appropriate to estimate the required return on equity with a model which permits the use of multiple growth rates. This may be a plausible approach to DCF, where investors expect different dividend growth rates in the near term and

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the mid-1950's, J. B. Williams exposited the DCF model in its present form nearly two decades earlier.

long run. If two growth rates, one near term and one long-run, are to be used in the context of a price *(P_0)* of $10.00, a dividend *($D_0$)* of $0.80, a near-term growth rate of 5.5%, and a long-run expected growth rate of 5.0% beginning at year 6, the required rate of return is 13.57% solved with a computer by iteration.

Dividend Yield

The historical annual dividend yield for the Electric Group is shown on Schedule 3. The 2005-2009 five-year average dividend yield was 4.6% for the Electric Group. The monthly dividend yields for the past twelve months are shown graphically on Schedule 8. These dividend yields reflect an adjustment to the month-end closing prices to remove the pro rata accumulation of the quarterly dividend amount since the last ex-dividend date.

The ex-dividend date usually occurs two business days before the record date of the dividend (i.e., the date by which a shareholder must own the shares to be entitled to the dividend payment--usually about two to three weeks prior to the actual payment). During a quarter (here defined as 91 days), the price of a stock moves up ratably by the dividend amount as the ex-dividend date approaches. The stock's price then falls by the amount of the dividend on the ex-dividend date. Therefore, it is necessary to calculate the fraction of the quarterly dividend since the time of the last ex-dividend date and to remove that amount from the price. This adjustment reflects normal recurring pricing of stocks in the market, and establishes a price which will reflect the true yield on a stock.

A six-month average dividend yield has been used to recognize the prospective orientation of the ratesetting process as explained in the direct testimony. For the purpose of a DCF calculation, the average dividend yields must be adjusted to reflect the prospective nature of the dividend payments, i.e., the higher expected dividends for the future rather than the

recent dividend payment annualized. An adjustment to the dividend yield component, when computed with annualized dividends, is required based upon investor expectation of quarterly dividend increases.

The procedure to adjust the average dividend yield for the expectation of a dividend increase during the initial investment period will be at a rate of one-half the growth component, developed below. The DCF equation, showing the quarterly dividend payments as D_0, may be stated in this fashion:

$$K = \frac{D_0(1+g)^0 + D_0(1+g)^0 + D_0(1+g)^1 + D_0(1+g)^1}{P_0} + g$$

The adjustment factor, based upon one-half the expected growth rate developed in my direct testimony, will be 2.750% (5.50% x .5) for the Electric Group, which assumes that two dividend payments will be at the expected higher rate during the initial investment period. Using the six-month average dividend yield as a base, the prospective (forward) dividend yield would be 5.36% (5.22% x 1.02750) for the Electric Group.

Another DCF model that reflects the discrete growth in the quarterly dividend (D_0) is as follows:

$$K = \frac{D_0(1+g)^{.25} + D_0(1+g)^{.50} + D_0(1+g)^{.75} + D_0(1+g)^{1.00}}{P_0} + g$$

This procedure confirms the reasonableness of the forward dividend yield previously calculated. The quarterly discrete adjustment provides a dividend yield of 5.40% (5.22% x 1.03415) for the Electric Group. The use of an adjustment is required for the periodic form of

the DCF in order to properly recognize that dividends grow on a discrete basis.

In either of the preceding DCF dividend yield adjustments, there is no recognition for the compound returns attributed to the quarterly dividend payments. Investors have the opportunity to reinvest quarterly dividend receipts. Recognizing the compounding of the

$$k = \left[\left(1 + \frac{D_0}{P_0}\right)^4 - 1\right] + g$$

periodic quarterly dividend payments *(D_0)*, results in a third DCF formulation:

This DCF equation provides no further recognition of growth in the quarterly dividend. Combining discrete quarterly dividend growth with quarterly compounding would provide the following DCF formulation, stating the quarterly dividend payments *(D_0)*:

$$k = \left[\left(1 + \frac{D_0(1+g)^{.25}}{P_0}\right)^4 - 1\right] + g$$

A compounding of the quarterly dividend yield provides another procedure to recognize the necessity for an adjusted dividend yield. The unadjusted average quarterly dividend yield was 1.3050% (5.22% ÷ 4) for the Electric Group. The compound dividend yield would be 5.40% (1.013226^4-1) for the Electric Group, recognizing quarterly dividend payments in a forward-looking manner. These dividend yields conform with investors' expectations in the context of reinvestment of their cash dividend.

For the Electric Group, a 5.39% forward-looking dividend yield is the average (5.36% + 5.40% + 5.40% = 16.16% ÷ 3) of the adjusted dividend yield using the form D_0/P_0 $(1+.5g)$, the dividend yield recognizing discrete quarterly growth, and the quarterly compound dividend yield with discrete quarterly growth.

Growth Rate

If viewed in its infinite form, the DCF model is represented by the discounted value of an endless stream of growing dividends. It would, however, require 100 years of future dividend payments so that the discounted value of those payments would equate to the present price so that the discount rate and the rate of return shown by the simplified Gordon form of the DCF model would be about the same. A century of dividend receipts represents an unrealistic investment horizon from almost any perspective. Because stocks are not held by investors forever, the growth in the share value (i.e., capital appreciation, or capital gains yield) is most relevant to investors' total return expectations. Hence, investor expected returns in the equity market are provided by capital appreciation of the investment as well as receipt of dividends. As such, the sale price of a stock can be viewed as a liquidating dividend which can be discounted along with the annual dividend receipts during the investment holding period to arrive at the investor expected return.

In its constant growth form, the DCF assumes that with a constant return on book common equity and constant dividend payout ratio, a firm's earnings per share, dividends per share and book value per share will grow at the same constant rate, absent any external financing by a firm. Because these constant growth assumptions do not actually prevail in the capital markets, the capital appreciation potential of an equity investment is best measured by the expected growth in earnings per share. Since the traditional form of the DCF assumes no

change in the price-earnings multiple, the value of a firm's equity will grow at the same rate as earnings per share. Hence, the capital gains yield is best measured by earnings per share growth using company-specific variables.

Investors consider both historical and projected data in the context of the expected growth rate for a firm. An investor can compute historical growth rates using compound growth rates or growth rate trend lines. Otherwise, an investor can rely upon published growth rates as provided in widely-circulated, influential publications. However, a traditional constant growth DCF analysis that is limited to such inputs suffers from the assumption of no change in the price-earnings multiple, i.e., that the value of a firm's equity will grow at the same rate as earnings. Some of the factors which actually contribute to investors' expectations of earnings growth and which should be considered in assessing those expectations, are: (i) the earnings rate on existing equity, (ii) the portion of earnings not paid out in dividends, (iii) sales of additional common equity, (iv) reacquisition of common stock previously issued, (v) changes in financial leverage, (vi) acquisitions of new business opportunities, (vii) profitable liquidation of assets, and (viii) repositioning of existing assets. The realities of the equity market regarding total return expectations, however, also reflect factors other than these inputs. Therefore, the DCF model contains overly restrictive limitations when the growth component is stated in terms of earnings per share (the basis for the capital gains yield) or dividends per share (the basis for the infinite dividend discount model). In these situations, there is inadequate recognition of the capital gains yields arising from stock price growth which could exceed earnings or dividends growth.

To assess the growth component of the DCF, analysts' projections of future growth influence investor expectations as explained above. One influential publication is The Value

Line Investment Survey which contains estimated future projections of growth. The Value Line Investment Survey provides growth estimates which are stated within a common economic environment for the purpose of measuring relative growth potential. The basis for these projections is the Value Line 3 to 5 year hypothetical economy. The Value Line hypothetical economic environment is represented by components and subcomponents of the National Income Accounts which reflect in the aggregate assumptions concerning the unemployment rate, manpower productivity, price inflation, corporate income tax rate, high-grade corporate bond interest rates, and Fed policies. Individual estimates begin with the correlation of sales, earnings and dividends of a company to appropriate components or subcomponents of the future National Income Accounts. These calculations provide a consistent basis for the published forecasts. Value Line's evaluation of a specific company's future prospects are considered in the context of specific operating characteristics that influence the published projections. Of particular importance for regulated firms, Value Line considers the regulatory quality, rates of return recently authorized, the historic ability of the firm to actually experience the authorized rates of return, the firm's budgeted capital spending, the firm's financing forecast, and the dividend payout ratio. The wide circulation of this source and frequent reference to Value Line in financial circles indicate that this publication has an influence on investor judgment with regard to expectations for the future.

There are other sources of earnings growth forecasts. One of these sources is the Institutional Brokers Estimate System ("IBES"). The IBES service provides data on consensus earnings per share forecasts and five-year earnings growth rate estimates. The publisher of IBES has been purchased by Thomson/First Call. The IBES forecasts have been integrated into the First Call consensus growth forecasts. The earnings estimates are obtained from financial

analysts at brokerage research departments and from institutions whose securities analysts are projecting earnings for companies in the First Call universe of companies. Other services that tabulate earnings forecasts and publish them are Zacks Investment Research. As with the IBES/First Call forecasts, Zacks provide consensus forecasts collected from analysts for most publically traded companies.

In each of these publications, forecasts of earnings per share for the current and subsequent year receive prominent coverage. That is to say, IBES/First Call, Zacks, and Value Line show estimates of current-year earnings and projections for the next year. While the DCF model typically focusses upon long-run estimates of growth, stock prices are clearly influenced by current and near-term earnings prospects. Therefore, the near-term earnings per share growth rates should also be factored into a growth rate determination.

Although forecasts of future performance are investor influencing[2], equity investors may also rely upon the observations of past performance. Investors' expectations of future growth rates may be determined, in part, by an analysis of historical growth rates. It is apparent that any serious investor would advise himself/herself of historical performance prior to taking an investment position in a firm. Earnings per share and dividends per share represent the principal financial variables which influence investor growth expectations.

Other financial variables are sometimes considered in rate case proceedings. For example, a company's internal growth rate, derived from the return rate on book common equity and the related retention ratio, is sometimes considered. This growth rate measure is represented by the Value Line forecast "*B*x*R*" shown on Schedule 10. Internal growth rates are often used as a

[2]As shown in a National Bureau of Economic Research monograph by John G. Cragg and Burton G. Malkiel, Expectations and the Structure of Share Prices, University of Chicago Press 1982.

proxy for book value growth. Unfortunately, this measure of growth is often not reflective of investor-expected growth. This is especially important when there is an indication of a prospective change in dividend payout ratio, earned return on book common equity, change in market-to-book ratios or other fundamental changes in the character of the business. Nevertheless, I have also shown the historical and projected growth rates in book value per share and internal growth rates.

Leverage Adjustment

As noted previously, the divergence of stock prices from book values creates a conflict within the DCF model when the results of a market-derived cost of equity are applied to the common equity account measured at book value in the ratesetting context. This is the situation today where the market price of stock exceeds its book value for most companies. This divergence of price and book value also creates a financial risk difference, whereby the capitalization of a utility measured at its market value contains relatively less debt and more equity than the capitalization measured at its book value. It is a well-accepted fact of financial theory that a relatively higher proportion of equity in the capitalization has less financial risk than another capital structure more heavily weighted with debt. This is the situation for the Electric Group where the market value of its capitalization contains more equity than is shown by the book capitalization. The following comparison demonstrates this situation where the market capitalization is developed by taking the "Fair Value of Financial Instruments" (Disclosures about Fair Value of Financial Instruments -- Statement of Financial Accounting Standards ("FAS") No. 107) as shown in the annual report for these companies and the market value of the common equity using the price of stock. The comparison of capital structure ratios is:

Electric Group	Capitalization at Market Value (Fair Value)	Capitalization at Book Value (Carrying Amounts)
Long-term Debt	47.22%	51.89%
Preferred Stock	0.90	1.08
Common Equity	51.88	47.03
Total	100.00%	100.00%

With regard to the capital structure ratios represented by the carrying amounts shown above, there are some variances from the ratios shown on Schedule 3. These variances arise from the use of balance sheet values in computing the capital structure ratios shown on Schedule 3 and the use of the Carrying Amounts of the Financial Instruments according to FAS 107 (the Carrying Amounts were used in the table shown above to be comparable to the Fair Value amounts used in the comparison calculations).

With the capital ratios calculated above, is necessary to first calculate the cost of equity for a firm without any leverage. The cost of equity for an unleveraged firm using the capital structure ratios calculated with market values is:

$$ku = ke - (((ku - i)\ 1\text{-}t)\ D / E) - (ku - d)\ P / E$$

$$8.96\% = 10.89\% - (((8.96\% - 5.79\%)\ .65)\ 47.22\%/51.88\%) - (8.96\% - 6.04\%)\ 0.90\%/51.88\%$$

where ku = cost of equity for an all-equity firm, ke = market determined cost equity, i = cost of debt[3], d = dividend rate on preferred stock[4], D = debt ratio, P = preferred stock ratio, and E = common equity ratio. The formula shown above indicates that the cost of equity for a firm with 100% equity is 8.96% using the market value of the Electric Group's capitalization. Having determined that the cost of equity is 8.96% for a firm with 100% equity, the rate of return on

[3] The cost of debt is the six-month average yield on Moody's A rated public utility bonds.

[4] The cost of preferred is the six-month average yield on Moody's "a" rated preferred stock.

common equity associated with the book value capital structure is:

$$ke = ku + (((ku - i)\ 1\text{-}t)\ D / E) + (ku - d)\ P / E$$

$$11.30\% = 8.96\% + (((8.96\% - 5.79\%).65)\ 51.89\%/47.03\%) + (8.96\% - 6.04\%)\ 1.08\%/47.03\%$$

INTEREST RATES

Interest rates can be viewed in their traditional nominal terms (i.e., the stated rate of interest) and in real terms (i.e., the stated rate of interest less the expected rate of inflation). Absent consideration of inflation, the real rate of interest is determined generally by supply factors which are influenced by investors willingness to forego current consumption (i.e., to save) and demand factors that are influenced by the opportunities to derive income from productive investments. Added to the real rate of interest is compensation required by investors for the inflationary impact of the declining purchasing power of their income received in the future. While interest rates are clearly influenced by the changing annual rate of inflation, it is important to note that the expected rate of inflation that is reflected in current interest rates may be quite different from the prevailing rate of inflation.

Rates of interest also vary by the type of interest bearing instrument. Investors require compensation for the risk associated with the term of the investment and the risk of default. The risk associated with the term of the investment is usually shown by the yield curve, i.e., the difference in rates across maturities. The typical structure is represented by a positive yield curve, which provides progressively higher interest rates as the maturities are lengthened. Flat (i.e., relatively level rates across maturities) or inverted (i.e., higher short-term rates than long-term rates) yield curves occur less frequently.

The risk of default is typically associated with the creditworthiness of the borrower. Differences in interest rates can be traced to the credit quality ratings assigned by the bond rating agencies, such as Moody's Investors Service, Inc. and Standard & Poor's Corporation. Obligations of the United States Treasury are usually considered to be free of default risk,

and hence reflect only the real rate of interest, compensation for expected inflation, and maturity risk. The Treasury has been issuing inflation-indexed notes, which automatically provide compensation to investors for future inflation, thereby providing a lower current yield on these issues.

Interest Rate Environment

Federal Reserve Board ("Fed") policy actions, which impact directly short-term interest rates also substantially, affect investor sentiment in long-term fixed-income securities markets. In this regard, the Fed has often pursued policies designed to build investor confidence in the fixed-income securities market. Formative Fed policy has had a long history, as exemplified by the historic 1951 Treasury-Federal Reserve Accord, and more recently, deregulation within the financial system, which increased the level and volatility of interest rates. The Fed has indicated that it will follow a monetary policy designed to promote noninflationary economic growth.

As background to the recent levels of interest rates, history shows that the Open Market Committee of the Federal Reserve board ("FOMC") began a series of moves toward lower short-term interest rates in mid-1990 -- at the outset of the previous recession. Monetary policy was influenced at that time by (i) steps taken to reduce the federal budget deficit, (ii) slowing economic growth, (iii) rising unemployment, and (iv) measures intended to avoid a credit crunch. Thereafter, the Federal government initiated several bold proposals to deal with future borrowings by the Treasury. With lower expected federal budget deficits and reduced Treasury borrowings, together with limitations on the supply of new 30-year

Treasury bonds, long-term interest rates declined to a twenty-year low, reaching a trough of 5.78% in October 1993.

On February 4, 1994, the FOMC began a series of increases in the Fed Funds rate (i.e., the interest rate on excess overnight bank reserves). The initial increase represented the first rise in short-term interest rates in five years. The series of seven increases doubled the Fed Funds rate to 6%. The increases in short-term interest rates also caused long-term rates to move up, continuing a trend, which began in the fourth quarter of 1993. The cyclical peak in long-term interest rates was reached on November 7 and 14, 1994 when 30-year Treasury bonds attained an 8.16% yield. Thereafter, long-term Treasury bond yields generally declined.

Beginning in mid-February 1996, long-term interest rates moved upward from their previous lows. After initially reaching a level of 6.75% on March 15, 1996, long-term interest rates continued to climb and reached a peak of 7.19% on July 5 and 8, 1996. For the period leading up to the 1996 Presidential election, long-term Treasury bonds generally traded within this range. After the election, interest rates moderated, returning to a level somewhat below the previous trading range. Thereafter, in December 1996, interest rates returned to a range of 6.5% to 7.0%, which existed for much of 1996.

On March 25, 1997, the FOMC decided to tighten monetary conditions through a one-quarter percentage point increase in the Fed Funds rate. This tightening increased the Fed Funds rate to 5.5%. In making this move, the FOMC stated that it was concerned by persistent strength of demand in the economy, which it feared would increase the risk of inflationary imbalances that could eventually interfere with the long economic expansion.

In the fourth quarter of 1997, the yields on Treasury bonds began to decline rapidly in response to an increase in demand for Treasury securities caused by a flight to safety triggered by the currency and stock market crisis in Asia. Liquidity provided by the Treasury market makes these bonds an attractive investment in times of crisis. This is because Treasury securities encompass a very large market, which provides ease of trading, and carry a premium for safety. During the fourth quarter of 1997, Treasury bond yields pierced the psychologically important 6% level for the first time since 1993.

Through the first half of 1998, the yields on long-term Treasury bonds fluctuated within a range of about 5.6% to 6.1% reflecting their attractiveness and safety. In the third quarter of 1998, there was further deterioration of investor confidence in global financial markets. This loss of confidence followed the moratorium (i.e., default) by Russia on its sovereign debt and fears associated with problems in Latin America. While not significant to the global economy in the aggregate, the August 17 default by Russia had a significant negative impact on investor confidence, following earlier discontent surrounding the crisis in Asia. These events subsequently led to a general pull back of risk-taking as displayed by banks growing reluctance to lend, worries of an expanding credit crunch, lower stock prices, and higher yields on bonds of riskier companies. These events contributed to the failure of the hedge fund, Long-Term Capital Management.

In response to these events, the FOMC cut the Fed Funds rate just prior to the mid-term Congressional elections. The FOMC's action was based upon concerns over how increasing weakness in foreign economies would affect the U.S. economy. As recently as July 1998, the FOMC had been more concerned about fighting inflation than the state of the

economy. The initial rate cut was the first of three reductions by the FOMC. Thereafter, the yield on long-term Treasury bonds reached a 30-year low of 4.70% on October 5, 1998. Long-term Treasury yields below 5% had not been seen since 1967. Unlike the first rate cut that was widely anticipated, the second rate reduction by the FOMC was a surprise to the markets. A third reduction in short-term interest rates occurred in November 1998 when the FOMC reduced the Fed Funds rate to 4.75%.

All of these events prompted an increase in the prices for Treasury bonds, which lead to the low yields described above. Another factor that contributed to the decline in yields on long-term Treasury bonds was a reduction in the supply of new Treasury issues coming to market due to the Federal budget surplus -- the first in nearly 30 years. The dollar amount of Treasury bonds being issued declined by 30% in two years thus resulting in higher prices and lower yields. In addition, rumors of some struggling hedge funds unwinding their positions further added to the gains in Treasury bond prices.

The financial crisis that spread from Asia to Russia and to Latin America pushed nervous investors from stocks into Treasury bonds, thus increasing demand for bonds, just when supply was shrinking. There was also a move from corporate bonds to Treasury bonds to take advantage of appreciation in the Treasury market. This resulted in a certain amount of exuberance for Treasury bond investments that formerly was reserved for the stock market. Moreover, yields in the fourth quarter of 1998 became extremely volatile as shown by Treasury yields that fell from 5.10% on September 29 to 4.70% on October 5, and thereafter returned to 5.10% on October 13. A decline and rebound of 40 basis points in Treasury yields in a two-week time frame is remarkable.

Beginning in mid-1999, the FOMC raised interest rates on six occasions reversing its actions in the fall of 1998. On June 30, 1999, August 24, 1999, November 16, 1999, February 2, 2000, March 21, 2000, and May 16, 2000, the FOMC raised the Fed Funds rate to 6.50%. This brought the Fed Funds rate to its highest level since 1991, and was 175 basis points higher than the level that occurred at the height of the Asian currency and stock market crisis. At the time, these actions were taken in response to more normally functioning financial markets, tight labor markets, and a reversal of the monetary ease that was required earlier in response to the global financial market turmoil.

As the year 2000 drew to a close, economic activity slowed and consumer confidence began to weaken. In two steps at the beginning and at the end of January 2001, the FOMC reduced the Fed Funds rate by one percentage point. These actions brought the Fed Funds rate to 5.50%. The FOMC described its actions as "a rapid and forceful response of monetary policy" to eroding consumer and business confidence exemplified by weaker retail sales and business spending on capital equipment and cut backs in manufacturing production. Subsequently, on March 20, 2001, April 18, 2001, May 15, 2001, June 27, 2001, and August 21, 2001, the FOMC lowered the Fed Funds in steps consisting of three 50 basis points decrements followed by two 25 basis points decrements. These actions took the Fed Funds rate to 3.50%. The FOMC observed on August 21, 2001:

> Household demand has been sustained, but business profits and capital spending continue to weaken and growth abroad is slowing, weighing on the U.S. economy. The associated easing of pressures on labor and product markets is expected to keep inflation contained.
>
> Although long-term prospects for productivity growth and the economy remain favorable, the Committee continues to

> believe that against the background of its long-run goals of price stability and sustainable economic growth and of the information currently available, the risks are weighted mainly toward conditions that may generate economic weakness in the foreseeable future.

After the terrorist attack on September 11, 2001, the FOMC made two additional 50 basis points reductions in the Fed Funds rate. The first reduction occurred on September 17, 2001 and followed the four-day closure of the financial markets following the terrorist attacks. The second reduction occurred at the October 2 meeting of the FOMC where it observed:

> The terrorist attacks have significantly heightened uncertainty in an economy that was already weak. Business and household spending as a consequence are being further damped. Nonetheless, the long-term prospects for productivity growth and the economy remain favorable and should become evident once the unusual forces restraining demand abate.

Afterward, the FOMC reduced the Fed Funds rate by 50 basis points on November 6, 2001 and by 25 basis points on December 11, 2001. In total, short-term interest rates were reduced by the FOMC eleven (11) times during the year 2001. These actions cut the Fed Funds rate by 4.75% and resulted in 1.75% for the Fed Funds rate.

In an attempt to deal with weakening fundamentals in the economy recovering from the recession that began in March 2001, the FOMC provided a psychologically important one-half percentage point reduction in the federal funds rate. The rate cut was twice as large as the market expected, and brought the fed funds rate to 1.25% on November 6, 2002. The FOMC stated that:

> The Committee continues to believe that an accommodative stance of monetary policy, coupled with still-robust underlying growth in productivity, is providing important ongoing support to economic activity. However, incoming

> economic data have tended to confirm that greater uncertainty, in part attributable to heightened geopolitical risks, is currently inhibiting spending, production, and employment. Inflation and inflation expectations remain well contained.
>
> In these circumstances, the Committee believes that today's additional monetary easing should prove helpful as the economy works its way through this current soft spot. With this action, the Committee believes that, against the background of its long-run goals of price stability and sustainable economic growth and of the information currently available, the risks are balanced with respect to the prospects for both goals in the foreseeable future.

As 2003 unfolded, there was a continuing expectation of lower yields on Treasury securities. In fact, the yield on ten-year Treasury notes reached a 45-year low near the end of the second quarter of 2003. For long-term Treasury bonds, those yields culminated with a 4.24% yield on June 13, 2003. Soon thereafter, the FOMC reduced the Fed Funds rate by 25 basis points on June 25, 2003. In announcing its action, the FOMC stated:

> The Committee continues to believe that an accommodative stance of monetary policy, coupled with still robust underlying growth in productivity, is providing important ongoing support to economic activity. Recent signs point to a firming in spending, markedly improved financial conditions, and labor and product markets that are stabilizing. The economy, nonetheless, has yet to exhibit sustainable growth. With inflationary expectations subdued, the Committee judged that a slightly more expansive monetary policy would add further support for an economy which it expects to improve over time.

Thereafter, intermediate and long-term Treasury yields moved marketedly higher. Higher yields on long-term Treasury bonds, which exceeded 5.00% can be traced to: (i) the market's disappointment that the Fed Funds rate was not reduced below 1.00%, (ii) an indication that the Fed will not use unconventional methods for implementing monetary policy, (iii)

growing confidence in a strengthening economy, and (iv) concerns regarding the Federal budget deficit. All these factors significantly changed the sentiment in the bond market.

For the remainder of 2003, the FOMC continued with its balanced monetary policy, thereby retaining the 1% Fed Funds rate. However, in 2004, the FOMC initiated a policy of moving toward a more neutral Fed Funds rate (i.e., removing the bias of abnormal low rates). On June 30, 2004, August 10, 2004, September 21, 2004, November 10, 2004, December 14, 2004, February 2, 2005, March 22, 2005, May 3, 2005, June 30, 2005, August 9, 2005, September 20, 2005, November 1, 2005, December 13, 2005, January 31, 2006, March 28, 2006, May 10, 2006, and June 29, 2006, the FOMC increased the Fed Funds rate in seventeen 25 basis point increments. These policy actions are widely interpreted as part of the process of moving toward a more neutral range for the Fed Funds rate.

Just after the FOMC meeting on August 7, 2007, where the FOMC decided to retain a 5.25% Fed Funds rate, turmoil in the credit markets prompted central banks throughout the world to inject over $325 billion of reserves into the banking system over a three-day period in reaction to a credit crunch. Problems had been developing earlier in 2007, beginning in the market for asset-backed securities linked to subprime mortgages. Valuation uncertainties for these securities caused liquidity concerns for hedge funds, investment banks, and financial institutions. The market for commercial paper, the most liquid part of the credit markets for non-Treasury securities, was also affected. In response to the market turmoil, the FOMC issued the following statement, the first of its type since after the September 11, 2001 terrorists' attack.

> The Federal Reserve is providing liquidity to facilitate the orderly functioning of financial markets.

> The Federal Reserve will provide reserves as necessary through open market operations to promote trading in the federal funds market at rates close to the Federal Open Market Committee's target rate of 5-1/4 percent. In current circumstances, depository institutions may experience unusual funding needs because of dislocations in money and credit markets. As always, the discount window is available as a source of funding.

Then, one week after its initial announcement, the FOMC made a surprise reduction of 50 basis points in the discount rate to narrow the spread between this rate and the target Fed Funds rate. At the same time, the FOMC made the following statement:

> Financial market conditions have deteriorated, and tighter credit conditions and increased uncertainty have the potential to restrain economic growth going forward. In these circumstances, although recent data suggest that the economy has continued to expand at a moderate pace, the Federal Open Market Committee judges that the downside risks to growth have increased appreciably. The Committee is monitoring the situation and is prepared to act as needed to mitigate the adverse effects on the economy arising from the disruptions in financial markets.

Thereafter, at its regularly scheduled meeting on September 18, 2007, the FOMC reduced the target Fed Funds rate to 4.75% and the discount rate was reduced to 5.25% in an effort to forestall the adverse effects of the financial market turmoil on the economy generally. Further reductions of 25 basis points occurred at the next two FOMC meetings on October 31, 2007 and on December 11, 2007. The December 11, 2007 FOMC statement indicated that:

> Incoming information suggests that economic growth is slowing, reflecting the intensification of the housing correction and some softening in business and consumer spending. Moreover, strains in financial markets have increased in recent weeks. Today's action, combined with the policy actions taken earlier, should help promote moderate growth over time.

> Readings on core inflation have improved modestly this year, but elevated energy and commodity prices, among other factors, may put upward pressure on inflation. In this context, the Committee judges that some inflation risks remain, and it will continue to monitor inflation developments carefully.
>
> Recent developments, including the deterioration in financial market conditions, have increased the uncertainty surrounding the outlook for economic growth and inflation. The Committee will continue to assess the effects of financial and other developments on economic prospects and will act as needed to foster price stability and sustainable economic growth.

With these actions, the Fed Funds rate and the discount rate closed the calendar year 2007 at 4.25% and 4.75%, respectively.

During 2008, many critical events occurred that influenced the capital markets, and hence interest rates. They include: (i) the collapse of The Bear Stearns Company and its acquisition by JPMorgan Chase & Co. with the aid of the Federal Reserve Bank of New York announced on March 16, 2008; (ii) the failure of IndyMac on July 11, 2008, which was at the time the third-largest banking failure in U.S. history, after a "run on the bank" by depositors; (iii) the placement of the government-sponsored enterprises ("GSE") Federal National Mortgage Association (Fannie Mae) and Freddie Mac into conservatorship on September 7, 2008 by the Federal Housing Finance Agency; (iv) the largest bankruptcy filing in history by Lehman Brothers Holding, Inc. on September 15, 2008; (v) the acquisition of the banking operations of Washington Mutual, then the largest U.S. savings bank, by JPMorgan Chase on September 24, 2008, (Washington Mutual's holding company subsequently filed for bankruptcy protection); (vi) the rescue of Merrill Lynch & Co., Inc. by Bank of America on September 15, 2008, with assistance of the Federal government; (vii) the

effective nationalization on September 23, 2008, of American International Group, then the world's largest insurance company, through the acquisition of 79.9% of its equity by the U.S. Treasury and (viii) other significant events affecting financial markets globally. The FOMC acted decisively in response to the events described above. Acting prior to its first regularly scheduled meeting in 2008, on January 22, 2008, the FOMC reduced the fed funds target by 75 basis points to 3.50% and the discount rate was reduced by a corresponding amount to 4.00%. Actions by the FOMC between meetings are unusual occurrences in recent years, thereby signifying the urgency that the FOMC saw in taking immediate action on monetary policy in response to the financial crisis. Then on January 30, 2008, the fed funds target rate and discount rate were further reduced by 50 basis points, bringing those rates to 3.00% and 3.50%, respectively. Credit market turmoil continued, and after the collapse of The Bear Stearn Companies noted above, the FOMC stated:

> The Federal Reserve on Sunday announced two initiatives designed to bolster market liquidity and promote orderly market functioning. Liquid, well-functioning markets are essential for the promotion of economic growth.
>
> First, the Federal Reserve Board voted unanimously to authorize the Federal Reserve Bank of New York to create a lending facility to improve the ability of primary dealers to provide financing to participants in securitization markets. This facility will be available for business on Monday, March 17. It will be in place for at least six months and may be extended as conditions warrant. Credit extended to primary dealers under this facility may be collateralized by a broad range of investment-grade debt securities. The interest rate charged on such credit will be the same as the primary credit rate, or discount rate, at the Federal Reserve Bank of New York.
>
> Second, the Federal Reserve Board unanimously approved a request by the Federal Reserve Bank of New York to decrease the primary credit rate from 3-1/2 percent to 3-1/4 percent,

> effective immediately. This step lowers the spread of the primary credit rate over the Federal Open Market Committee's target federal funds rate to 1/4 percentage point. The Board also approved an increase in the maximum maturity of primary credit loans to 90 days from 30 days.
>
> The Board also approved the financing arrangement announced by JPMorgan Chase & Co. and The Bear Stearns Companies Inc.

Then on March 18, 2008, the FOMC reduced the fed funds rate to 2.25% and the discount rate to 2.50%. Afterward on April 30, 2008, the FOMC further reduces the fed funds rate to 2.00% and the discount rate to 2.25%. At subsequent meetings the FOMC held the fed funds rate steady. Then on October 8, 2008, the FOMC took another unusual unscheduled action by reducing the Fed Funds rate to 1.50% and the discount rate to 1.75%. Then, on October 29, the FOMC lowered the Fed Funds rate to 1.00% and the discount rate to 1.25%. As 2008 ended, the FOMC lowered the Fed Funds rate to a target range of 0.00% to 0.25%, its lowest rate ever. As a further response to the financial crisis, Congress passed and the President signed on October 3, 2008, the Emergency Economic Stabilization Act of 2008, which, among other provisions, provides the mechanism to deploy up to $700 billion through the Troubled Asset Relief Program ("TARP") to address urgent needs created by the credit crisis the country has experienced. Then, the Federal Reserve Board instituted its Commercial Paper Funding Facility ("CPFF"), which was authorized on October 7, 2008, and it participated in coordinated efforts by major central banks to support financial stability and to maintain flows of credit in the banking system. These programs included a $75 billion Term Auction Facility ("TAF"), a future TAF auction totaling $150 billion, and an increase to $620 billion of swap authorizations with central banks in Canada, England, Japan, Denmark, the

European Union, Norway, Australia, Sweden, and Switzerland. Further, on February 17, 2009, the President signed the American Recovery and Reinvestment Act that committed $789 billion by the Federal government in an effort to create jobs, jumpstart growth and to transform the economy in reaction to the recession that began in December 2007.

The FOMC maintained its target range of 0.00% to 0.25% throughout the remainder of 2009. At its April 28, 2010 meeting, the FOMC stated:

> Information received since the Federal Open Market Committee met in March suggests that economic activity has continued to strengthen and that the labor market is beginning to improve. Growth in household spending has picked up recently but remains constrained by high unemployment, modest income growth, lower housing wealth, and tight credit. Business spending on equipment and software has risen significantly; however, investment in nonresidential structures is declining and employers remain reluctant to add to payrolls. Housing starts have edged up but remain at a depressed level. While bank lending continues to contract, financial market conditions remain supportive of economic growth. Although the pace of economic recovery is likely to be moderate for a time, the Committee anticipates a gradual return to higher levels of resource utilization in a context of price stability.

Public Utility Bond Yields

The Risk Premium analysis of the cost of equity is represented by the combination of a firm's borrowing rate for long-term debt capital plus a premium that is required to reflect the additional risk associated with the equity of a firm as explained in Appendix G. Due to the senior nature of the long-term debt of a firm, its cost is lower than the cost of equity due to the prior claim, which lenders have on the earnings, and assets of a corporation.

As a generalization, all interest rates track to varying degrees of the benchmark yields established by the market for Treasury securities. Public utility bond yields usually reflect

the underlying Treasury yield associated with a given maturity plus a spread to reflect the specific credit quality of the issuing public utility. Market sentiment can also have an influence on the spreads as described below. The spread in the yields on public utility bonds and Treasury bonds varies with market conditions, as does the relative level of interest rates at varying maturities shown by the yield curve.

Pages 1 and 2 of Schedule 11 provide the recent history of long-term public utility bond yields for the rating categories of Aa, A and Baa (no yields are shown for Aaa rated public utility bonds because this index has been discontinued). The top four rating categories of Aaa, Aa, A, and Baa are known as "investment grades" and are generally regarded as eligible for bank investments under commercial banking regulations. These investment grades are distinguished from "junk" bonds, which have ratings of Ba and below.

A relatively long history of the spread between the yields on long-term A-rated public utility bonds and 20-year Treasury bonds is shown on page 3 of Schedule 11. There, it is shown that those spreads were about one percent during the years 1994 through 1997. With the aversion to risk and flight to quality described earlier, a significant widening of the spread in the yields between corporate (e.g., public utility) and Treasury bonds developed in 1998, after an initial widening of the spread that began in the fourth quarter of 1997. The significant widening of spreads in 1998 was unexpected by some technically savvy investors, as shown by the debacle at the Long-Term Capital Management hedge fund. When Russia defaulted its debt on August 17, some investors had to cover short positions when Treasury prices spiked upward. Short covering by investors that guessed wrong on the relationship between corporate and Treasury bonds also contributed to the run-up in Treasury bond prices

by increasing the demand for them. This helped to contribute to a widening of the spreads between corporate and Treasury bonds.

As shown on page 3 of Schedule 11, the spread in yields between A-rated public utility bonds and 20-year Treasury bonds was about one percentage point prior to 1998, 1.32% in 1998, 1.42% in 1999, 2.01% in 2000, 2.13% in 2001, 1.94% in 2002, 1.62% in 2003, 1.12% in 2004, 1.01% in 2005, 1.08% in 2006, 1.16% in 2007, 2.17% in 2008, and 1.93% in 2009. As shown by the monthly data presented on pages 4 and 5 of Schedule 11, the interest rate spread between the yields on 20-year Treasury bonds and A-rated public utility bonds was 1.48 percentage points for the twelve-months ended April 2010. For the six- and three-month periods ending April 2010, the yield spread was 1.35% and 1.34%, respectively.

Beginning in August 2007, spreads widened significantly with the development of the credit crisis. As the credit crisis developed, there was a flight to quality, thereby increasing demand and reducing the yields on Treasury obligations. While this situation is most pronounced at the shortest end of the yield curve (i.e., obligations with the shortest duration), all Treasury yields display relatively low yields by reference to other credit obligations. By the end of 2009, the spread in yields on A-rated public utility bonds and 20-year Treasury bonds declined significantly from the peak of the credit crisis.

Risk-Free Rate of Return in the CAPM

Regarding the risk-free rate of return (see Appendix H), pages 2 and 3 of Schedule 13 provides the yields on the broad spectrum of Treasury Notes and Bonds. Some practitioners of the CAPM would advocate the use of short-term treasury yields (and some would argue

for the yields on 91-day Treasury Bills). Other advocates of the CAPM would advocate the use of longer-term treasury yields as the best measure of a risk-free rate of return. As Ibbotson has indicated:

> The Cost of Capital in a Regulatory Environment. When discounting cash flows projected over a long period, it is necessary to discount them by a long-term cost of capital. Additionally, regulatory processes for setting rates often specify or suggest that the desired rate of return for a regulated firm is that which would allow the firm to attract and retain debt and equity capital over the long term. Thus, the long-term cost of capital is typically the appropriate cost of capital to use in regulated ratesetting. (Stocks, Bonds, Bills and Inflation - 1992 Yearbook, pages 118-119)

As indicated above, long-term Treasury bond yields represent the correct measure of the risk-free rate of return in the traditional CAPM. Very short term yields on Treasury bills should be avoided for several reasons. First, rates should be set on the basis of financial conditions that will exist during the effective period of the proposed rates. Second, 91-day Treasury bill yields are more volatile than longer-term yields and are greatly influenced by FOMC monetary policy, political, and economic situations. Moreover, Treasury bill yields have been shown to be empirically inadequate for the CAPM. Some advocates of the theory would argue that the risk-free rate of return in the CAPM should be derived from quality long-term corporate bonds. To take a balanced approach to the risk-free rate of return, the yield on long-term Treasury bonds has been used for this purpose.

APPENDIX G TO DIRECT TESTIMONY OF PAUL R. MOUL

RISK PREMIUM ANALYSIS

The cost of equity requires recognition of the risk premium required by common equities over long-term corporate bond yields. In the case of senior capital, a company contracts for the use of long-term debt capital at a stated coupon rate for a specific period of time and in the case of preferred stock capital at a stated dividend rate, usually with provision for redemption through sinking fund requirements. In the case of senior capital, the cost rate is known with a high degree of certainty because the payment for use of this capital is a contractual obligation, and the future schedule of payments is known. In essence, the investor-expected cost of senior capital is equal to the realized return over the entire term of the issue, absent default.

The cost of equity, on the other hand, is not fixed, but rather varies with investor perception of the risk associated with the common stock. Because no precise measurement exists as to the cost of equity, informed judgment must be exercised through a study of various market factors, which motivate investors to purchase common stock. In the case of common equity, the realized return rate may vary significantly from the expected cost rate due to the uncertainty associated with earnings on common equity. This uncertainty highlights the added risk of a common equity investment.

As one would expect from traditional risk and return relationships, the cost of equity is affected by expected interest rates. As noted in Appendix F, yields on long-term corporate bonds traditionally consist of a real rate of return without regard to inflation, an increment to reflect investor perception of expected future inflation, the investment horizon shown by the term of the issue until maturity, and the credit risk associated with each rating category.

The Risk Premium approach recognizes the required compensation for the more risky common equity over the less risky secured debt position of a lender. The cost of equity stated in terms of the familiar risk premium approach is:

$$k=i+RP$$

where, the cost of equity *("k")* is equal to the interest rate on long-term corporate debt *("i")*, plus an equity risk premium *("RP")* which represents the additional compensation for the riskier common equity.

Equity Risk Premium

The equity risk premium is determined as the difference in the rate of return on debt capital and the rate of return on common equity. Because the common equity holder has only a residual claim on earnings and assets, there is no assurance that achieved returns on common equities will equal expected returns. This is quite different from returns on bonds, where the investor realizes the expected return during the entire holding period, absent default. It is for this reason that common equities are always more risky than senior debt securities. There are investment strategies available to bond portfolio managers that immunize bond returns against fluctuations in interest rates because bonds are redeemed through sinking funds or at maturity, whereas no such redemption is mandated for public utility common equities.

It is well recognized that the expected return on more risky investments will exceed the required yield on less risky investments. Neither the possibility of default on a bond nor the maturity risk detracts from the risk analysis, because the common equity risk rate differential (i.e., the investor-required risk premium) is always greater than the return components on a bond. It should also be noted that the investment horizon is typically long-run for both corporate debt and equity, and that the risk of default (i.e., corporate bankruptcy) is a concern

to both debt and equity investors. Thus, the required yield on a bond provides a benchmark or starting point with which to track and measure the cost rate of common equity capital. There is no need to segment the bond yield according to its components, because it is the total return demanded by investors that is important for determining the risk rate differential for common equity. This is because the complete bond yield provides the basis to determine the differential, and as such, consistency requires that the computed differential must be applied to the complete bond yield when applying the risk premium approach. To apply the risk rate differential to a partial bond yield would result in a misspecification of the cost of equity because the computed differential was initially determined by reference to the entire bond return.

The risk rate differential between the cost of equity and the yield on long-term corporate bonds can be determined by reference to a comparison of holding period returns (here defined as one year) computed over long time spans. This analysis assumes that over long periods of time investors' expectations are on average consistent with rates of return actually achieved. Accordingly, historical holding period returns must not be analyzed over an unduly short period because near-term realized results may not have fulfilled investors' expectations. Moreover, specific past period results may not be representative of investment fundamentals expected for the future. This is especially apparent when the holding period returns include negative returns, which are not representative of either investor requirements of the past or investor expectations for the future. The short-run phenomenon of unexpected returns (either positive or negative) demonstrates that an unduly short historical period would not adequately support a risk premium analysis. It is important to distinguish between investors' motivation to invest, which encompass positive return expectations, and the knowledge that losses can occur. No rational

investor would forego payment for the use of capital, or expect loss of principal, as a basis for investing. Investors will hold cash rather than invest with the expectation of a loss.

Within these constraints, page 1 of Schedule 12 provides the historical holding period returns for the S&P Public Utility Index which has been independently computed and the historical holding period returns for the S&P Composite Index which have been reported in Stocks, Bonds, Bills and Inflation published by Ibbotson & Associates. The tabulation begins with 1928 because January 1928 is the earliest monthly dividend yield for the S&P Public Utility Index. I have considered all reliable data for this study to avoid the introduction of a particular bias to the results. The measurement of the common equity return rate differential is based upon actual capital market performance using realized results. As a consequence, the underlying data for this risk premium approach can be analyzed with a high degree of precision. Informed professional judgment is required only to interpret the results of this study, but not to quantify the component variables.

The risk rate differentials for all equities, as measured by the S&P Composite, are established by reference to long-term corporate bonds. For public utilities, the risk rate differentials are computed with the S&P Public Utilities as compared with public utility bonds.

The measurement procedure used to identify the risk rate differentials consisted of arithmetic means, geometric means, and medians for each series. Measures of the central tendency of the results from the historical periods provide the best indication of representative rates of return. In regulated ratesetting, the correct measure of the equity risk premium is the arithmetic mean because a utility must expect to earn its cost of capital in each year in order to provide investors with their long-term expectations. In other contexts, such as pension determinations, compound rates of return, as shown by the geometric means, may be

appropriate. The median returns are also appropriate in ratesetting because they are a measure of the central tendency of a single period rate of return. Median values have also been considered in this analysis because they provide a return, which divides the entire series of annual returns in half, and are representative of a return that symbolizes, in a meaningful way, the central tendency of all annual returns contained within the analysis period. Medians are regularly included in many investor-influencing publications.

As previously noted, the arithmetic mean provides the appropriate point estimate of the risk premium. As further explained in Appendix H, the long-term cost of capital in rate cases requires the use of arithmetic means. To supplement my analysis, I have also used the rates of return taken from the geometric mean and median for each series to provide the bounds of the range to measure the risk rate differentials. While the use of the geometric mean would be inappropriate for CAPM purposes due to the specification of that model, it can provide a limit of the bounds for the Risk Premium approach that does not contain the single-period limitation. This further analysis shows that when selecting the midpoint from a range established with the geometric means and medians, the arithmetic mean is indeed a reasonable measure for the long-term cost of capital. For the years 1928 through 2007, the risk premiums for each class of equity are:

	S&P Composite	S&P Public Utilities
Arithmetic Mean	5.82%	5.52%
Geometric Mean	4.23%	3.47%
Median	9.27%	7.50%
Midpoint of Range	6.75%	5.49%
Average of Arithmetic Mean and Midpoint of Range	6.29%	5.51%

The empirical evidence suggests that the common equity risk premium is higher for the S&P Composite Index compared to the S&P Public Utilities.

If, however, specific historical periods were also analyzed in order to match more closely historical fundamentals with current expectations, the results provided on page 2 of Schedule 12 should also be considered. One of these sub-periods included the 56-year period, 1952-2007. These years follow the historic 1951 Treasury-Federal Reserve Accord, which affected monetary policy and the market for government securities.

A further investigation was undertaken to determine whether realignment has taken place subsequent to the historic 1973 Arab Oil embargo and during the deregulation of the financial markets. In each case, the public utility risk premiums were computed by using the arithmetic mean, and the geometric means and medians to establish the range shown by those values. The time periods covering the more recent periods 1974 through 2007 and 1979 through 2007 contain events subsequent to the initial oil shock and the advent of monetarism as Fed policy, respectively. For the 56-year, 34-year and 29-year periods, the public utility risk premiums were 6.58%, 6.08%, and 6.37% respectively, as shown by the average of the specific point-estimates and the midpoint of the ranges provided on page 2 of Schedule 12.

CAPITAL ASSET PRICING MODEL

Modern portfolio theory provides a theoretical explanation of expected returns on portfolios of securities. The Capital Asset Pricing Model ("CAPM") attempts to describe the way prices of individual securities are determined in efficient markets where information is freely available and is reflected instantaneously in security prices. The CAPM states that the expected rate of return on a security is determined by a risk-free rate of return plus a risk premium, which is proportional to the non-diversifiable (or systematic) risk of a security.

The CAPM theory has several unique assumptions that are not common to most other methods used to measure the cost of equity. As with other market-based approaches, the CAPM is an expectational concept. There has been significant academic research conducted that found that the empirical market line, based upon historical data, has a less steep slope and higher intercept than the theoretical market line of the CAPM. For equities with a beta less than 1.0, such as utility common stocks, the CAPM theoretical market line will underestimate the realistic expectation of investors in comparison with the empirical market line, which shows that the CAPM may potentially misspecify investors' required return.

The CAPM considers changing market fundamentals in a portfolio context. The balance of the investment risk, or that characterized as unsystematic, must be diversified. Some argue that diversifiable (unsystematic) risk is unimportant to investors. But this contention is not completely justified because the business and financial risk of an individual company, including regulatory risk, are widely discussed within the investment community and therefore influence investors in regulated firms. In addition, I note that the CAPM assumes that through portfolio diversification, investors will minimize the effect of the unsystematic

(diversifiable) component of investment risk. Because it is not known whether the average investor holds a well-diversified portfolio, the CAPM must also be used with other models of the cost of equity.

To apply the traditional CAPM theory, three inputs are required: the beta coefficient *("β")*, a risk-free rate of return *("Rf")*, and a market premium *("Rm - Rf")*. The cost of equity stated in terms of the CAPM is:

$$k = Rf + \beta\,(Rm - Rf)$$

As previously indicated, it is important to recognize that the academic research has shown that the security market line was flatter than that predicted by the CAPM theory and it had a higher intercept than the risk-free rate. These tests indicated that for portfolios with betas less than 1.0, the traditional CAPM would understate the return for such stocks. Likewise, for portfolios with betas above 1.0, these companies had lower returns than indicated by the traditional CAPM theory. Once again, CAPM assumes that through portfolio diversification investors will minimize the effect of the unsystematic (diversifiable) component of investment risk. Therefore, the CAPM must also be used with other models of the cost of equity, especially when it is not known whether the average public utility investor holds a well-diversified portfolio.

Beta

The beta coefficient is a statistical measure, which attempts to identify the non-diversifiable (systematic) risk of an individual security and measures the sensitivity of rates of return on a particular security with general market movements. Under the CAPM theory, a security that has a beta of 1.0 should theoretically provide a rate of return equal to the return

rate provided by the market. When employing stock price changes in the derivation of beta, a stock with a beta of 1.0 should exhibit a movement in price, which would track the movements in the overall market prices of stocks. Hence, if a particular investment has a beta of 1.0, a one percent increase in the return on the market will result, on average, in a one percent increase in the return on the particular investment. An investment, which has a beta less than 1.0, is considered to be less risky than the market.

The beta coefficient *("β")*, the one input in the CAPM application, which specifically applies to an individual firm, is derived from a statistical application, which regresses the returns on an individual security (dependent variable) with the returns on the market as a whole (independent variable). The beta coefficients for utility companies typically describe a small proportion of the total investment risk because the coefficients of determination (R^2) are low.

Page 1 of Schedule 13 provides the betas published by Value Line. By way of explanation, the Value Line beta coefficient is derived from a "straight regression" based upon the percentage change in the weekly price of common stock and the percentage change weekly of the New York Stock Exchange Composite average using a five-year period. The raw historical beta is adjusted by Value Line for the measurement effect resulting in overestimates in high beta stocks and underestimates in low beta stocks. Value Line then rounds its betas to the nearest .05 increment. Value Line does not consider dividends in the computation of its betas.

Market Premium

The final element necessary to apply the CAPM is the market premium. The market premium by definition is the rate of return on the total market less the risk-free rate of return

("Rm - Rf"). In this regard, the market premium in the CAPM has been calculated from the total return on the market of equities using forecast and historical data. The future market return is established with forecasts by Value Line using estimated dividend yields and capital appreciation potential.

With regard to the forecast data, I have relied upon the Value Line forecasts of capital appreciation and the dividend yield on the 1,700 stocks in the Value Line Survey. According to the May 21, 2010 edition of The Value Line Investment Survey Summary and Index, (see page 5 of Schedule 13) the total return on the universe of Value Line equities is:

	Dividend Yield		Median Appreciation Potential		Median Total Return
As of April 2, 2010	1.9%	+	11.58% [1]	=	13.48%

The tabulation shown above provides the dividend yield and capital gains yield of the companies followed by Value Line. Another measure of the total market return is provided by the DCF return on the S&P 500 Composite index. That return is shown below.

DCF Result for the S&P 500 Composite

D/P		1+.5g		+	g	=	k
1.91%	(	1.0506	)	+	10.11%	=	12.12%

where:	Price (P)	at	30-Apr-2010	= 1186.69
	Dividend (D)	for	4th Qtr. '09	= 5.66
	Dividend (D)		annualized	= 22.64
	Growth (g)		First Call EpS	= 10.11%

Using these indicators, the total market return is 12.80% (13.48% + 12.12% = 25.60% ÷ 2)

[1]The estimated median appreciation potential is forecast to be 50% for 3 to 5 years hence. The annual capital gains yield at the midpoint of the forecast period is 10.67% (i.e., $1.50^{.25}$ - 1).

using both the Value Line and S&P derived returns. With the 12.80% forecast market return and the 4.75% risk-free rate of return, a 8.05% (12.80% - 4.75%) market premium would be indicated using forecast market data.

I have also provided market premiums that have been widely circulated among the investment and academic community, which today is published by Morningstar, Inc. These data are contained in the 2009 Ibbotson® Stocks, Bonds, Bills and Inflation ("SBBI") Classic Yearbook. From the data provided on page 6 of Schedule 13, I calculate a market premium using the historical common stock arithmetic mean returns of 11.7% less government bond arithmetic mean returns of 6.1%. For the period 1926-2008, the market premium was 5.6% (11.7% - 6.1%). I should note that the arithmetic mean must be used in the CAPM because it is a single period model. It is further confirmed by Ibbotson who has indicated:

> *Arithmetic Versus Geometric Differences*
> For use as the expected equity risk premium in the CAPM, the *arithmetic* or *simple difference* of the *arithmetic* means of stock market returns and riskless rates is the relevant number. This is because the CAPM is an additive model where the cost of capital is the sum of its parts. Therefore, the CAPM expected equity risk premium must be derived by arithmetic, *not geometric*, subtraction.
>
> *Arithmetic Versus Geometric Means*
> The expected equity risk premium should always be calculated using the arithmetic mean. The arithmetic mean is the rate of return which, when compounded over multiple periods, gives the mean of the probability distribution of ending wealth values. This makes the arithmetic mean return appropriate for computing the cost of capital. The discount rate that equates expected (mean) future values with the present value of an investment is that investment's cost of capital. The logic of using the discount rate as the cost of capital is reinforced by noting that investors will discount their (mean) ending wealth values from an investment back to the present using the arithmetic mean, for the reason given above. They will

> therefore require such an expected (mean) return prospectively (that is, in the present looking toward the future) to commit their capital to the investment. (Stocks, Bonds, Bills and Inflation - 1996 Yearbook, pages 153-154)

Also shown on page 6 of Schedule 13 is the long-horizon expected market premiums of 6.5% also published in the SBBI Classic Yearbook. An average of the historical and expected SBBI market premium is 6.05% (5.6% + 6.5% = 12.1% ÷ 2).

For the CAPM, a market premium of 7.05% (6.05% + 8.05% = 14.10% ÷ 2) would be reasonable which is the average of the 6.05% SBBI data and the 8.05% Value Line and S&P 500 data.

COMPARABLE EARNINGS APPROACH

Value Line's analysis of the companies that it follows includes a wide range of financial and market variables, including nine items that provide ratings for each company. From these nine items, one category has been removed dealing with industry performance because, under approach employed, the particular business type is not significant. In addition, two categories have been ignored that deal with estimates of current earnings and dividends because they are not useful for comparative purposes. The remaining six categories provide relevant measures to establish comparability. The definitions for each of the six criteria (from the Value Line Investment Survey - Subscriber Guide) follow:

Timeliness Rank

> The rank for a stock's probable relative market performance in the year ahead. Stocks ranked 1 (Highest) or 2 (Above Average) are likely to outpace the year-ahead market. Those ranked 4 (Below Average) or 5 (Lowest) are not expected to outperform most stocks over the next 12 months. Stocks ranked 3 (Average) will probably advance or decline with the market in the year ahead. Investors should try to limit purchases to stocks ranked 1 (Highest) or 2 (Above Average) for Timeliness.

Safety Rank

> A measure of potential risk associated with individual common stocks rather than large diversified portfolios (for which Beta is good risk measure). Safety is based on the stability of price, which includes sensitivity to the market (see Beta) as well as the stock's inherent volatility, adjusted for trend and other factors including company size, the penetration of its markets, product market volatility, the degree of financial leverage, the earnings quality, and the overall condition of the balance sheet. Safety Ranks range from 1 (Highest) to 5 (Lowest). Conservative investors should try to limit purchases to equities ranked 1 (Highest) or 2 (Above Average) for Safety.

Financial Strength

The financial strength of each of the more than 1,600 companies in the VS II data base is rated relative to all the others. The ratings range from A++ to C in nine steps. (For screening purposes, think of an A rating as "greater than" a B). Companies that have the best relative financial strength are given an A++ rating, indicating ability to weather hard times better than the vast majority of other companies. Those who don't quite merit the top rating are given an A+ grade, and so on. A rating as low as C++ is considered satisfactory. A rating of C+ is well below average, and C is reserved for companies with very serious financial problems. The ratings are based upon a computer analysis of a number of key variables that determine (a) financial leverage, (b) business risk, and (c) company size, plus the judgment of Value Line's analysts and senior editors regarding factors that cannot be quantified across-the-board for companies. The primary variables that are indexed and studied include equity coverage of debt, equity coverage of intangibles, "quick ratio", accounting methods, variability of return, fixed charge coverage, stock price stability, and company size.

Price Stability Index

An index based upon a ranking of the weekly percent changes in the price of the stock over the last five years. The lower the standard deviation of the changes, the more stable the stock. Stocks ranking in the top 5% (lowest standard deviations) carry a Price Stability Index of 100; the next 5%, 95; and so on down to 5. One standard deviation is the range around the average weekly percent change in the price that encompasses about two thirds of all the weekly percent change figures over the last five years. When the range is wide, the standard deviation is high and the stock's Price Stability Index is low.

Beta

A measure of the sensitivity of the stock's price to overall fluctuations in the New York Stock Exchange Composite Average. A Beta of 1.50 indicates that a stock tends to rise (or fall) 50% more than the New York Stock Exchange Composite Average. Use Beta to measure the stock market risk inherent in any diversified portfolio of, say, 15 or more companies.

Otherwise, use the Safety Rank, which measures total risk inherent in an equity, including that portion attributable to market fluctuations. Beta is derived from a least squares regression analysis between weekly percent changes in the price of a stock and weekly percent changes in the NYSE Average over a period of five years. In the case of shorter price histories, a smaller time period is used, but two years is the minimum. The Betas are periodically adjusted for their long-term tendency to regress toward 1.00.

Technical Rank

A prediction of relative price movement, primarily over the next three to six months. It is a function of price action relative to all stocks followed by Value Line. Stocks ranked 1 (Highest) or 2 (Above Average) are likely to outpace the market. Those ranked 4 (Below Average) or 5 (Lowest) are not expected to outperform most stocks over the next six months. Stocks ranked 3 (Average) will probably advance or decline with the market. Investors should use the Technical and Timeliness Ranks as complements to one another.

Exhibit PRM-1

DUQUESNE LIGHT COMPANY

EXHIBIT

TO ACCOMPANY

THE DIRECT TESTIMONY

OF

PAUL R. MOUL

CONCERNING
RATE OF RETURN

Exhibit PRM-1

Duquesne Light Company
Index of Schedules

Duquesne Light Company
Proposed Rate of Return
Estimated at March 31, 2011

Type of Capital	Ratios	Cost Rate	Weighted Cost Rate
Long-Term Debt	42.04%	6.07%	2.55%
Preferred Stock	5.54%	5.89%	0.33%
Common Equity	52.42%	11.25%	5.90%
Total	100.00%		8.78%

Indicated levels of fixed charge coverage assuming that the Company could actually achieve its proposed rate of return:

Pre-tax coverage of interest expense based upon a 41.4935% composite federal and state income tax rate (13.20% ÷ 2.55%)	5.18 x
Post-tax coverage of interest expense (8.78% ÷ 2.55%)	3.44 x
Post-tax coverage of interest expense and preferred stock dividends (8.78% ÷ 2.88%)	3.05 x

Duquesne Light Company
Capitalization and Financial Statistics
2005-2009, Inclusive

	2009	2008	2007	2006	2005	
			(Millions of Dollars)			
Amount of Capital Employed						
Permanent Capital	$ 1,622.4	$ 1,554.4	$ 1,540.6	$ 1,498.0	$ 1,413.6	
Short-Term Debt	$ 45.0	$ 75.0	$ -	$ 18.8	$ -	
Total Capital	$ 1,667.4	$ 1,629.4	$ 1,540.6	$ 1,516.8	$ 1,413.6	
						Average
Capital Structure Ratios						
Based on Permanent Capital:						
Long-Term Debt	27.2%	24.9%	22.2%	45.5%	45.0%	33.0%
Preferred Stock	6.7%	7.0%	7.0%	9.8%	10.4%	8.2%
Common Equity	66.1%	68.1%	70.8%	44.7%	44.6%	58.9%
	100.0%	100.0%	100 0%	100.0%	100 0%	100 0%
Based on Total Capital:						
Total Debt, incl. Short Term	29.2%	28.4%	22.2%	46.1%	45.0%	34.2%
Preferred Stock	6.5%	6.6%	7.0%	9.7%	10.4%	8.0%
Common Equity	64.3%	65 0%	70.8%	44.2%	44.6%	57.8%
	100.0%	100 0%	100.0%	100.0%	100.0%	100.0%
Rate of Return on Book Common Equity	7.0%	7.1%	8.7%	-0.6%	11.2%	6.7%
Operating Ratio (1)	81.2%	81.7%	78.3%	90.1%	81.4%	82.5%
Coverage incl. AFUDC (2)						
Pre-tax: All Interest Charges	5.79 x	7.54 x	5.70 x	1.55 x	3.41 x	4.80 x
Post-tax: All Interest Charges	3.79 x	4.59 x	3.35 x	1.10 x	2.52 x	3.07 x
Overall Coverage: All Int. & Pfd. Div.	3.12 x	3.62 x	2.80 x	0.93 x	2.16 x	2.53 x
Coverage excl. AFUDC (3)						
Pre-tax: All Interest Charges	5.79 x	7.54 x	5.70 x	1.55 x	3.41 x	4.80 x
Post-tax: All Interest Charges	3.79 x	4.59 x	3.35 x	1.10 x	2.52 x	3.07 x
Overall Coverage: All Int. & Pfd. Div.	3.12 x	3.62 x	2.80 x	0.93 x	2.16 x	2.53 x
Quality of Earnings & Cash Flow						
AFC/Income Avail. for Common Equity	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Effective Income Tax Rate	41.9%	45.0%	50.1%	81.2%	36.8%	51.0%
Internal Cash Generation/Construction (4)	74.4%	51.1%	66.3%	48.3%	69.5%	61.9%
Gross Cash Flow/ Avg. Total Debt(5)	41.6%	45.8%	32.6%	17.3%	15.1%	30.5%
Gross Cash Flow Interest Coverage(6)	7.62 x	8.88 x	5.77 x	3.73 x	3.44 x	5.89 x
Common Dividend Coverage (7)	3.24 x	1.65 x	3.24 x	13.93 x	4.24 x	5.26 x

See Page 2 for Notes.

Duquesne Light Company.
Capitalization and Financial Statistics
2005-2009, Inclusive

Notes:

(1) Total operating expenses, maintenance, depreciation and taxes other than income as a percentage of operating revenues.

(2) Coverage calculations represent the number of times available earnings including AFUDC (allowance for funds used during construction), as reported in its entirety, cover fixed charges.

(3) Coverage calculations represent the number of times available earnings excluding AFUDC (allowance for funds used during construction), as reported in its entirety, cover fixed charges.

(4) Internal cash generation/gross construction is the percentage of gross construction expenditures provided by internally generated funds from operations after payment of all cash dividends.

(5) Gross Cash Flow (sum of net income, depreciation, amortization, net deferred income taxes and investment tax credits, less AFUDC) as a percentage of average total debt.

(6) Gross Cash Flow plus interest charges divided by interest charges.

(7) Common dividend coverage is the relationship of internally generated funds from operations after payment of preferred stock dividends to common dividends paid.

Source of Information: Company provided data

Electric Group
Capitalization and Financial Statistics [1]
2005-2009, Inclusive

	2009	2008	2007	2006	2005	Average
			(Millions of Dollars)			
Amount of Capital Employed						
Permanent Capital	$ 6,744.6	$ 6,344.0	$ 5,887.8	$ 5,629.4	$ 5,330.9	
Short-Term Debt	$ 138.8	$ 317.7	$ 247.5	$ 132.4	$ 204.1	
Total Capital	$ 6,883.4	$ 6,661.7	$ 6,135.3	$ 5,761.8	$ 5,535.0	
Market-Based Financial Ratios						
Price-Earnings Multiple	14 x	15 x	18 x	18 x	16 x	16 x
Market/Book Ratio	122.9%	141.3%	169.0%	153.5%	140.4%	145.4%
Dividend Yield	5.8%	4.6%	3.9%	4.3%	4.6%	4.6%
Dividend Payout Ratio	76.8%	71.9%	67.7%	73.8%	77.3%	73.5%
Capital Structure Ratios						
Based on Permanent Capital:						
Long-Term Debt	52.7%	52.3%	51.3%	51.5%	50.8%	51.7%
Preferred Stock	1.1%	1.2%	1.4%	1.5%	1.6%	1.4%
Common Equity [2]	46.2%	46.5%	47.3%	47.0%	47.6%	46.9%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Based on Total Capital:						
Total Debt incl. Short Term	53.6%	55.1%	54.3%	52.7%	52.5%	53.6%
Preferred Stock	1.1%	1.1%	1.3%	1.5%	1.5%	1.3%
Common Equity [2]	45.4%	43.8%	44.5%	45.8%	45.9%	45.1%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Rate of Return on Book Common Equity [2]	9.0%	9.1%	9.7%	9.1%	5.6%	8.5%
Operating Ratio [3]	88.3%	89.7%	89.9%	90.6%	92.5%	90.2%
Coverage incl. AFUDC [4]						
Pre-tax: All Interest Charges	3.06 x	3.07 x	3.29 x	3.21 x	2.54 x	3.03 x
Post-tax: All Interest Charges	2.33 x	2.30 x	2.50 x	2.50 x	2.00 x	2.33 x
Overall Coverage: All Int. & Pfd. Div.	2.29 x	2.26 x	2.45 x	2.44 x	1.95 x	2.28 x
Coverage excl. AFUDC [4]						
Pre-tax: All Interest Charges	3.03 x	3.02 x	3.23 x	3.16 x	2.50 x	2.99 x
Post-tax: All Interest Charges	2.30 x	2.24 x	2.45 x	2.45 x	1.96 x	2.28 x
Overall Coverage: All Int. & Pfd. Div.	2.26 x	2.20 x	2.40 x	2.39 x	1.91 x	2.23 x
Quality of Earnings & Cash Flow						
AFC/Income Avail. for Common Equity	2.4%	5.0%	4.3%	5.2%	2.2%	3.8%
Effective Income Tax Rate	35.2%	36.8%	34.0%	35.5%	77.2%	43.7%
Internal Cash Generation/Construction [5]	100.5%	95.1%	74.8%	90.8%	59.4%	84.1%
Gross Cash Flow/ Avg. Total Debt [6]	22.2%	22.9%	19.3%	19.7%	14.3%	19.7%
Gross Cash Flow Interest Coverage [7]	4.88 x	4.92 x	4.42 x	4.39 x	3.45 x	4.41 x
Common Dividend Coverage [8]	4.39 x	4.73 x	3.83 x	3.15 x	2.63 x	3.75 x

See Page 2 for Notes.

Electric Group
Capitalization and Financial Statistics
2005-2009, Inclusive

Notes:
(1) All capitalization and financial statistics for the group are the arithmetic average of the achieved results for each individual company in the group.
(2) Excluding Accumulated Other Comprehensive Income ("OCI") from the equity account.
(3) Total operating expenses, maintenance, depreciation and taxes other than income taxes as a percent of operating revenues.
(4) Coverage calculations represent the number of times available earnings, both including and excluding AFUDC (allowance for funds used during construction) as reported in its entirety, cover fixed charges.
(5) Internal cash generation/gross construction is the percentage of gross construction expenditures provided by internally-generated funds from operations after payment of all cash dividends divided by gross construction expenditures.
(6) Gross Cash Flow (sum of net income, depreciation, amortization, net deferred income taxes and investment tax credits, less total AFUDC) plus interest charges, divided by interest charges.
(7) Gross Cash Flow plus interest charges divided by interest charges.
(8) Common dividend coverage is the relationship of internally-generated funds from operations after payment of preferred stock dividends to common dividends paid.

Basis of Selection
The Electric Group includes companies that (i) their stock is traded on the New York Stock Exchange, (ii) they are listed in the "Electric Utility (East)" section of The Value Line Investment Survey, (iii) they operate in the Northeast region of the U.S., (iv) they are not currently the target of a publicly-announced merger or acquisition, and (v) they do not have a significant amount of electric generation.

Ticker	Company	Corporate Credit Ratings		Stock	S&P Stock	Value Line
		Moody's	S&P	Traded	Ranking	Beta
CHG	CH Energy Group	A3	A	NYSE	A-	0.65
CV	Central Vermont P.S.	Baa3	NR	NYSE	B	0.75
ED	Consolidated Edison	A3	A-	NYSE	B+	0.65
NU	Northeast Utilities	Baa1	BBB	NYSE	B	0.70
NST	NSTAR	A1	A+	NYSE	A-	0.65
POM	Pepco Holdings	Baa2	BBB	NYSE	B	0.80
UIL	UIL Holdings	Baa2	BBB	NYSE	B	0.70
	Average	Baa1	BBB+		B+	0.70

Note: Ratings are those of utility subsidiaries

Source of Information: Utility COMPUSTAT

Standard & Poor's Public Utilities
Capitalization and Financial Statistics [1]
2005-2009, Inclusive

	2009	2008	2007	2006	2005	
			(Millions of Dollars)			
Amount of Capital Employed						
Permanent Capital	$ 16,345.0	$ 15,307.2	$ 13,978.1	$ 14,025.4	$ 13,213.3	
Short-Term Debt	$ 370.6	$ 746.9	$ 578.0	$ 478.8	$ 436.5	
Total Capital	$ 16,715.6	$ 16,054.1	$ 14,556.1	$ 14,504.2	$ 13,649.8	
Market-Based Financial Ratios						Average
Price-Earnings Multiple	14 x	15 x	16 x	17 x	16 x	16 x
Market/Book Ratio	138.4%	184.8%	228.7%	217.3%	211.3%	196.1%
Dividend Yield	5.0%	4.1%	3.3%	3.7%	3.7%	4.0%
Dividend Payout Ratio	68.1%	60.6%	53.3%	61.6%	59.4%	60.6%
Capital Structure Ratios						
Based on Permanent Capital:						
Long-Term Debt	52.7%	53.7%	51.8%	53.0%	54.5%	53.1%
Preferred Stock	0.9%	1.0%	1.1%	1.2%	1.3%	1.1%
Common Equity [2]	46.3%	45.4%	47.1%	45.9%	44.2%	45.8%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Based on Total Capital:						
Total Debt incl. Short Term	54.2%	56.6%	54.5%	55.1%	56.8%	55.4%
Preferred Stock	0.9%	1.0%	1.1%	1.1%	1.2%	1.1%
Common Equity [2]	44.9%	42.5%	44.5%	43.8%	41.9%	43.5%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Rate of Return on Book Common Equity [2]	10.0%	12.3%	13.1%	12.1%	11.2%	11.7%
Operating Ratio [3]	82.9%	84.2%	84.3%	84.6%	86.0%	84.4%
Coverage incl. AFUDC [4]						
Pre-tax: All Interest Charges	3.66 x	3.42 x	3.81 x	3.38 x	3.23 x	3.50 x
Post-tax: All Interest Charges	2.73 x	2.58 x	2.87 x	2.62 x	2.57 x	2.67 x
Overall Coverage: All Int. & Pfd. Div.	2.66 x	2.55 x	2.84 x	2.59 x	2.53 x	2.63 x
Coverage excl. AFUDC [4]						
Pre-tax: All Interest Charges	3.56 x	3.31 x	3.73 x	3.33 x	3.19 x	3.42 x
Post-tax: All Interest Charges	2.63 x	2.47 x	2.79 x	2.57 x	2.53 x	2.60 x
Overall Coverage: All Int. & Pfd. Div.	2.56 x	2.44 x	2.75 x	2.54 x	2.49 x	2.56 x
Quality of Earnings & Cash Flow						
AFC/Income Avail. for Common Equity	7.6%	7.2%	5.0%	3.5%	1.0%	4.9%
Effective Income Tax Rate	31.6%	32.3%	34.1%	32.7%	29.4%	32.0%
Internal Cash Generation/Construction [5]	90.5%	78.6%	82.3%	88.5%	101.9%	88.4%
Gross Cash Flow/ Avg. Total Debt [6]	26.9%	24.7%	24.6%	22.6%	20.8%	23.9%
Gross Cash Flow Interest Coverage [7]	5.65 x	5.13 x	4.94 x	4.49 x	4.40 x	4.92 x
Common Dividend Coverage [8]	5.15 x	5.31 x	5.84 x	4.31 x	4.46 x	5.01 x

See Page 2 for Notes.

Standard & Poor's Public Utilities
Capitalization and Financial Statistics
2005-2009, Inclusive

Notes:

(1) All capitalization and financial statistics for the group are the arithmetic average of the achieved results for each individual company in the group.
(2) Excluding Accumulated Other Comprehensive Income ("OCI") from the equity account
(3) Total operating expenses, maintenance, depreciation and taxes other than income taxes as a percent of operating revenues.
(4) Coverage calculations represent the number of times available earnings, both including and excluding AFUDC (allowance for funds used during construction) as reported in its entirety, cover fixed charges.
(5) Internal cash generation/gross construction is the percentage of gross construction expenditures provided by internally-generated funds from operations after payment of all cash dividends divided by gross construction expenditures.
(6) Gross Cash Flow (sum of net income, depreciation, amortization, net deferred income taxes and investment tax credits, less total AFUDC) as a percentage of average total debt.
(7) Gross Cash Flow (sum of net income, depreciation, amortization, net deferred income taxes and investment tax credits, less total AFUDC) plus interest charges, divided by interest charges.
(8) Common dividend coverage is the relationship of internally-generated funds from operations after payment of preferred stock dividends to common dividends paid.

Source of Information: Annual Reports to Shareholders
Utility COMPUSTAT

Standard & Poor's Public Utilities

Company Identities [1]

	Ticker	Credit Rating [2] Moody's	Credit Rating [2] S&P	Common Stock Traded	S&P Stock Ranking	Value Line Beta
Allegheny Energy	AYE	Baa3	BBB-	NYSE	B	1.00
Ameren Corporation	AEE	Baa2	BBB-	NYSE	B+	0.80
American Electric Power	AEP	Baa2	BBB	NYSE	B	0.70
CMS Energy	CMS	Baa2	BBB-	NYSE	B	0.80
CenterPoint Energy	CNP	Baa3	BBB	NYSE	B	0.80
Consolidated Edison	ED	A3	A-	NYSE	B+	0.65
Constellation Energy Group	CEG	Baa2	BBB	NYSE	B	0.80
DTE Energy Co.	DTE	Baa1	BBB	NYSE	B	0.75
Dominion Resources	D	Baa1	A-	NYSE	B+	0.70
Duke Energy	DUK	A3	A-	NYSE	B	0.65
Edison Int'l	EIX	A3	BBB+	NYSE	B	0.80
Entergy Corp.	ETR	Baa2	BBB	NYSE	A	0.70
EQT Corp.	EQT	Baa1	BBB	NYSE	B+	1.15
Exelon Corp.	EXC	A3	BBB	NYSE	B+	0.85
FPL Group	FPL	A1	A	NYSE	A	0.75
FirstEnergy Corp.	FE	Baa2	BBB	NYSE	A-	0.80
Integrys Energy Group	TEG	A2	A-	NYSE	B+	0.95
NICOR Inc.	GAS	A2	AA	NYSE	B	0.70
NiSource Inc.	NI	Baa2	BBB-	NYSE	B	0.85
Northeast Utilities	NU	Baa1	BBB	NYSE	B	0.70
PEPCO Holdings, Inc.	POM	Baa2	BBB	NYSE	B	0.80
PG&E Corp.	PCG	A3	BBB+	NYSE	B	0.55
PPL Corp.	PPL	Baa1	A-	NYSE	B+	0.70
Pinnacle West Capital	PNW	Baa2	BBB-	NYSE	B	0.75
Progress Energy, Inc.	PGN	A3	BBB+	NYSE	B	0.65
Public Serv. Enterprise Inc.	PEG	Baa1	BBB	NYSE	B+	0.80
Questar Corp.	STR	A3	BBB+	NYSE	A	1.20
SCANA Corp.	SCG	Baa1	BBB+	NYSE	B	0.65
Sempra Energy	SRE	A2	A	NYSE	B+	0.85
Southern Co.	SO	A2	A	NYSE	A-	0.55
TECO Energy	TE	Baa1	BBB	NYSE	B	0.85
Wisconsin Energy Corp.	WEC	A1	A-	NYSE	B+	0.65
Xcel Energy Inc	XEL	A3	BBB+	NYSE	B	0.65
Average for S&P Utilities		Baa1	BBB+		B+	0.77

Note: [1] Includes companies contained in S&P Utility Compustat. AES Corp. and Dynegy, Inc. are not included.
[2] Ratings are those of utility subsidiaries

Source of Information:
Moody's Investors Service
Standard & Poor's Corporation
Standard & Poor's Stock Guide
Value Line Investment Survey for Windows

Duquesne Light Company
Capitalization and Related Capital Structure Ratios
Actual at March 31, 2010 and Estimated at March 31, 2011

	Actual at March 31, 2010			Estimated at March 31, 2011		
	Amount Outstanding	Ratios		Amount Outstanding	Ratios	
		Excl. S-T Debt	Incl. S-T Debt		Excl S-T Debt	Incl S-T Debt
Long-Term Debt	$ 400,980,022	25.22%	25.06%	$ 818,999,690 [2]	42.04%	42.04%
Preferred Stock	107,935,500	6.79%	6.75%	107,935,500	5 54%	5.54%
Common Equity						
Common Stock	10			10		
Capital Surplus	988,426,521			991,363,492 [3]		
Retained earnings[1]	92,840,302			29,822,476 [4]		
Total Common Equity	1,081,266,833	68.00%	67.57%	1,021,185,978	52.42%	52.42%
Total Permanent Capital	1,590,182,355	100.01%	99.38%	1,948,121,168	100.00%	100.00%
Short-term Debt	10,000,000		0 62%	-		0.00%
Total Capital Employed	$ 1,600,182,355		100.00%	$ 1,948,121,168		100 00%

Notes: [1] Excluding Accumulated Other Comprehensive Income ("OCI"):

	Amount
Total at March 31, 2010	$ (10,586,695)
Total at March 31, 2011	$ (11,073,788)

[2] Reflects changes in the principal amount of long-term debt as follows:

Series	Amount
Beaver County 1999 Series E due 3/01/31	$ 75,500,000
Ohio Water Development Authority 1999 Series C due 3/01/31	$ 33,955,000
Ohio Water Development Authority 1999 Series B due 3/01/31 (AMT)	$ 13,500,000
Ohio Air Quality Development Authority 1999 Series B due 10/01/27	$ 20,500,000
Beaver County 1999 Series C due 8/01/33	$ 18,000,000
Intercompany Loans	$ 253,900,755

[3] Projection of capital surplus.

[4] Projection of retained earnings.

Source of Information: Company provided data

Duquesne Light Company
Calculation of the Embedded Cost of Long-Term Debt
Actual at March 31, 2010

Series	Principal Amount Outstanding (1)	Percent to Total	Effective Cost Rate	Weighted Cost Rate (2)
First Mortgage Bonds				
6.70% FMB due 04/15/12	200,000,000	45.23%	6.79%	3.07%
6.57% FMB due 05/15/14	100,000,000	22.62%	6.79%	1.54%
Pollution Control Revenue Bonds				
Allegheny County 1999 Series A due 12/01/13	50,000,000	11.31%	4.39%	0.50%
Allegheny County 1999 Series B due 09/01/11	47,925,000	10.84%	4.13%	0.45%
Beaver County 1999 Series D due 4/01/31 (AMT)	44,250,000	10.01%	4.55%	0.46%
Total Long -Term Debt	442,175,000	100.00%		6.01%
Unamortized Call Premium	(41,194,978)			
Long Term- Debt	$ 400,980,022			
Annualized Cost	$ 26,557,440			
Amortization of Gain on Reacquired Debt	(109,511)			
Amortization of Loss on Reacquired Debt	2,817,153			
Total Cost	$ 29,265,082			7.30%

Notes: (1) Includes current portion of long-term debt.
(2) As calculated on page 3 of this schedule.

Source of Information: Company provided data

Duquesne Light Company
Calculation of the Embedded Cost of Long-Term Debt
Estimated at March 31, 2011

Series	Principal Amount Outstanding [1]	Percent to Total	Effective Cost Rate	Weighted Cost Rate [2]
First Mortgage Bonds				
6.70% FMB due 04/15/12	200,000,000	23.32%	6.79%	1.58%
6.57% FMB due 05/15/14	100,000,000	11.66%	6.79%	0.79%
Pollution Control Revenue Bonds				
Allegheny County 1999 Series A due 12/01/13	50,000,000	5.83%	4.39%	0.26%
Allegheny County 1999 Series B due 09/01/11	47,925,000	5.59%	4.13%	0.23%
Beaver County 1999 Series D due 4/01/31 (AMT)	44,250,000	5.16%	4.55%	0.23%
Beaver County 1999 Series E due 3/01/31	75,500,000	8.80%	5.02%	0.44%
Ohio Water Development Authority 1999 Series C due 3/01/31	33,955,000	3.96%	5.02%	0.20%
Ohio Water Development Authority 1999 Series B due 3/01/31 (AMT)	13,500,000	1.57%	5.52%	0.09%
Ohio Air Quality Development Authority	20,500,000	2.39%	4.86%	0.12%
Beaver County 1999 Series C due 8/01/33	18,000,000	2.10%	5.06%	0.11%
Intercompany Loans	253,900,755	29.61%	4.89%	1.45%
Total Long -Term Debt	857,530,755	100.00%		5.49%
Unamortized Call Premium	(38,531,065)			
Long Term- Debt	$ 818,999,690			
Annualized Cost	$ 47,120,295			
Amortization of Loss on Reacquired Debt	2,618,881			
Total Cost	$ 49,739,176			6.07%

Notes: [1] Includes current portion of long-term debt.
[2] As calculated on page 3 of this schedule.

Source of Information: Company provided data

Duquesne Light Company
Calculation of the Effective Cost of Long-Term Debt by Series

Series	Coupon Rate	Date of Issue	Date of Maturity	Average Term in Years [1]	Principal Amount Outstanding	Premium/ Discount & Expense	Net Proceeds	Net Proceeds Ratio	Effective Cost Rate [2]
First Mortgage Bonds									
6.70% FMB due 04/15/12	6 70%	04/15/02	04/15/12	10 0	$ 200,000,000	$ 1,300,000	$ 198,700,000	99.35%	6.79%
6.57% FMB due 05/15/14	6 57%	03/03/09	02/15/14	5.0	100,000,000	901,436	99,098,564	99.10%	6.79%
Pollution Control Revenue Bonds									
Allegheny County 1999 Series A due 12/01/13	4.35%	11/18/99	12/01/13	14 0	50,000,000	210,987	49,789,013	99 58%	4.39%
Allegheny County 1999 Series B due 09/01/11	4.05%	11/18/99	09/01/11	11.8	47,925,000	348,772	47,576,228	99 27%	4 13%
Beaver County 1999 Series D due 4/01/31 (AMT)	4.50%	11/18/99	11/01/29	30.0	44,250,000	376,475	43,873,525	99.15%	4.55%
Beaver County 1999 Series E due 3/01/31	4 90%	03/15/11	03/01/31	20 0	75,500,000	1,132,500	74,367,500	98.50%	5.02%
Ohio Water Development Authority	4.90%	03/15/11	03/01/31	20.0	33,955,000	509,325	33,445,675	98.50%	5 02%
Ohio Water Development Authority 1999 Series B due	5.40%	03/15/11	03/01/31	20.0	13,500,000	202,500	13,297,500	98.50%	5 52%
Ohio Air Quality Development Authority 1999 Series B due 10/01/27	4.73%	12/15/10	10/01/27	16.8	20,500,000	307,500	20,192,500	98.50%	4.86%
Beaver County 1999 Series C due 8/01/33	4 95%	03/15/11	08/01/33	22 4	18,000,000	270,000	17,730,000	98 50%	5 06%
Intercompany Loans	4.8875%	07/01/10	07/01/20	10.0	253,900,755	-	253,900,755	100 00%	4 89%

Notes: [1] Determined by taking into account the effect the annual sinking fund requirements which are met by the retirement of bonds which reduce the term of each issue.
[2] The effective cost for each issue is the yield to maturity using as inputs the average term of issue, coupon rate, and net proceeds ratio.

Source of Information: Company provided data

Duquesne Light Company
Calculation of the Embedded Cost of Preferred Stock
Actual at March 31, 2010

Series	Principal Amount Outstanding	Percent to Total	Effective Cost Rate	Weighted Cost Rate [1]
3.75% Series	$ 7,400,000	6.86%	3.77%	0.26%
4.10% Series	5,993,000	5.55%	4.12%	0.23%
4.15% Series	6,622,500	6.14%	4.16%	0.26%
4.20% Series	5,000,000	4.63%	4.23%	0.20%
6.50% Series	74,950,000	69.44%	6.67%	4.63%
$2.10 Series	7,970,000	7.38%	4.19%	0.31%
	$ 107,935,500	100.00%		5.89%

Notes: [1] As calculated on page 3 of this schedule.

Source of Information: Company provided data

Duquesne Light Company
Calculation of the Embedded Cost of Preferred Stock
Estimated at March 31, 2011

Series	Principal Amount Outstanding	Percent to Total	Effective Cost Rate	Weighted Cost Rate [1]
3.75% Series	$ 7,400,000	6.86%	3.77%	0.26%
4.10% Series	5,993,000	5.55%	4.12%	0.23%
4.15% Series	6,622,500	6.14%	4.16%	0.26%
4.20% Series	5,000,000	4.63%	4.23%	0.20%
6.50% Series	74,950,000	69.44%	6.67%	4.63%
$2.10 Series	7,970,000	7.38%	4.19%	0.31%
	$ 107,935,500	100.00%		5.89%

Notes: [1] As calculated on page 3 of this schedule.

Source of Information: Company provided data

Duquense Light Company
Calculation of the Effective Cost of Preferred Stock by Series

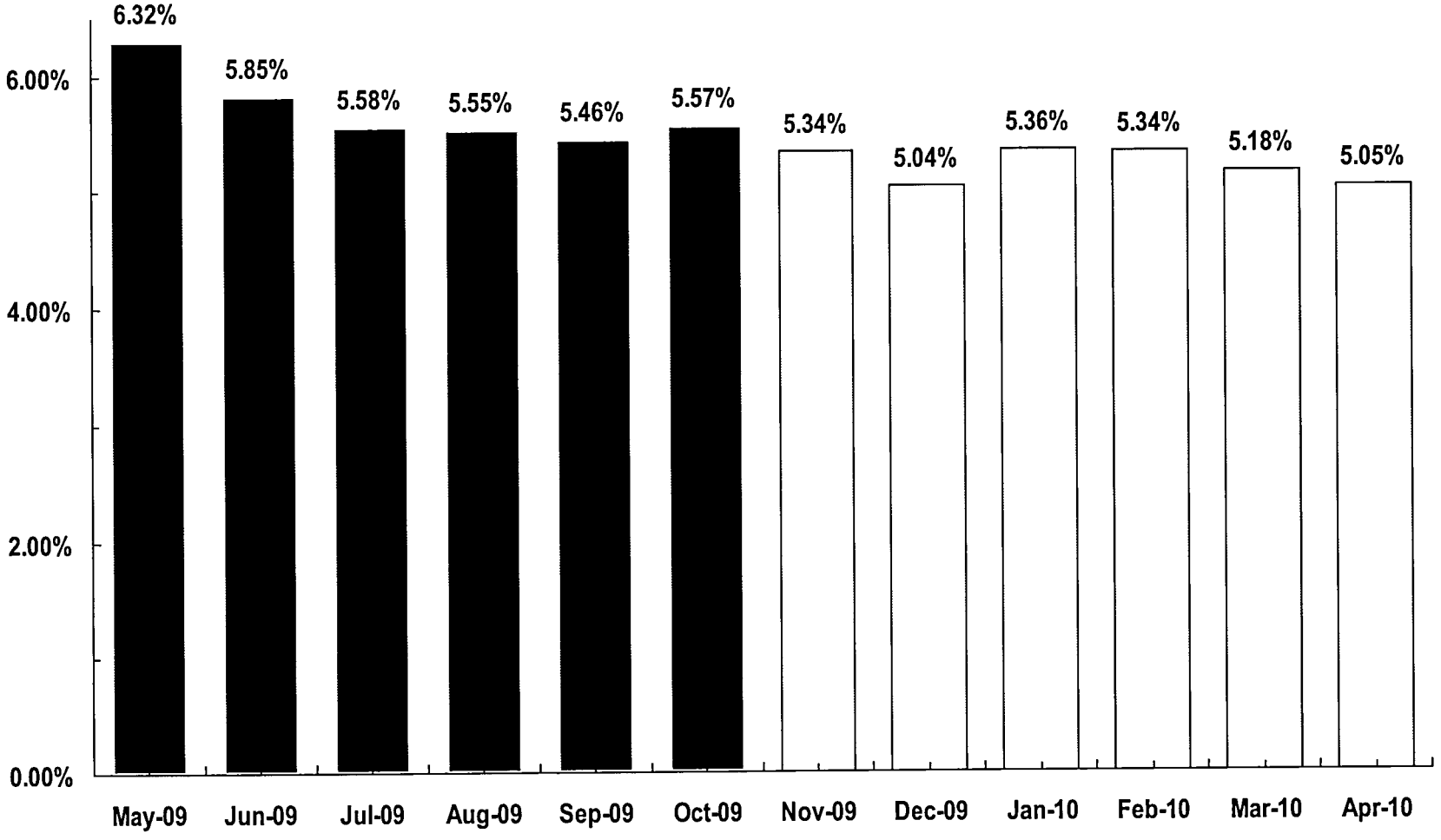
Series	Dividend Rate	Date of Issue	Original Principal Amount	Premium/Discount and Expense	Net Proceeds	Net Proceeds Ratio	Effective Cost Rate [1]
3.75% Series	3.75%	09/19/50	$ 7,500,000	$ 47,010	$ 7,452,990	99.37%	3.77%
4.10% Series	4.10%	07/01/54	6,000,000	31,828	5,968,172	99.47%	4.12%
4.15% Series	4.15%	09/24/52	7,000,000	25,540	6,974,460	99.64%	4.16%
4.20% Series	4.20%	12/14/53	5,000,000	31,915	4,968,085	99.36%	4.23%
6.50% Series	6.50%	04/16/04	75,000,000	1,899,354	73,100,646	97.47%	6.67%
$2.10 Series	4.20%	01/25/55	8,000,000	(10,544)	8,010,544	100.13%	4.19%

Notes: [1] For series without sinking fund requirements, the effective cost rate is the nominal dividend rate divided by the net proceeds ratio.

Source of Information: Company provided data

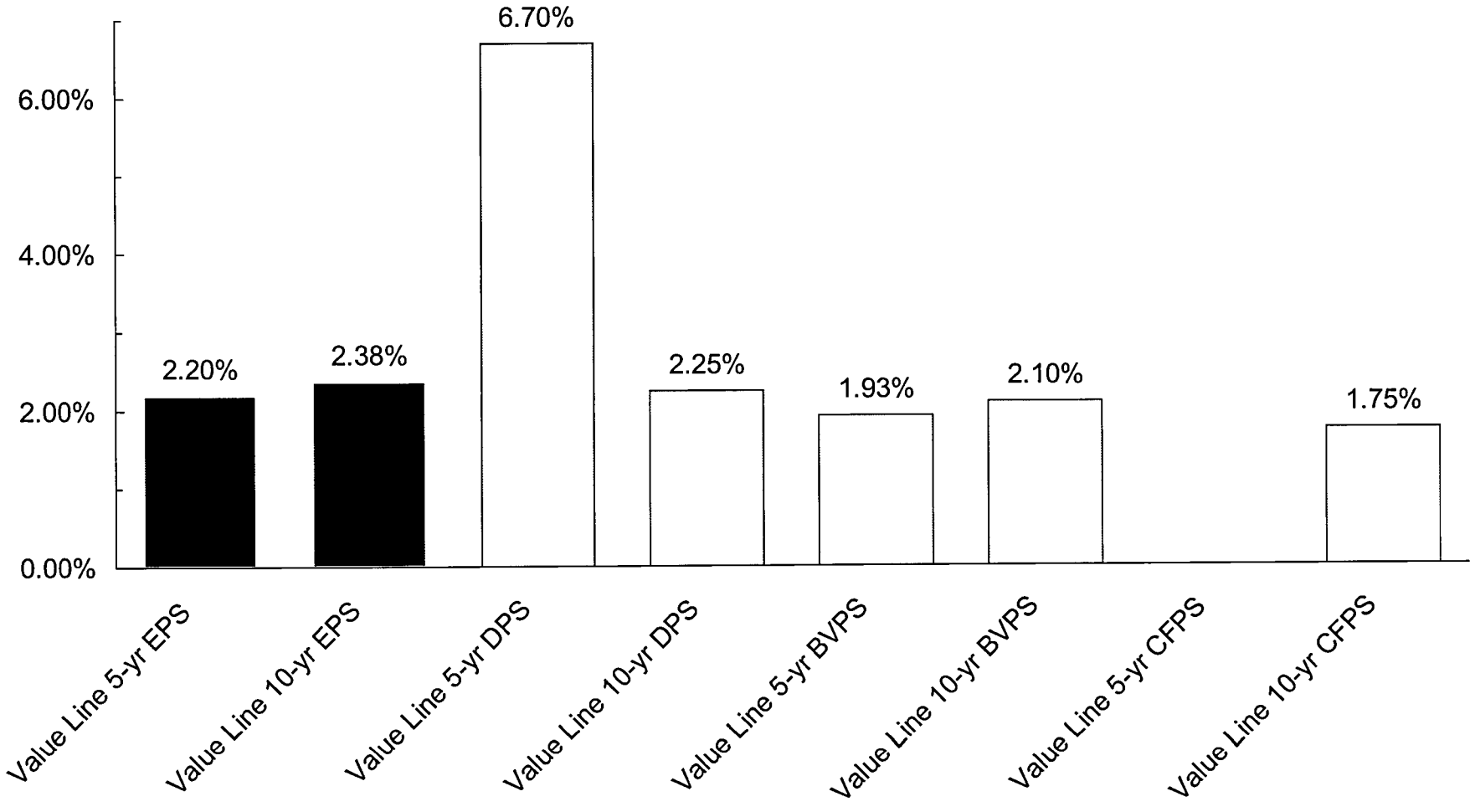
Electric Group

Monthly Dividend Yields



Electric Group

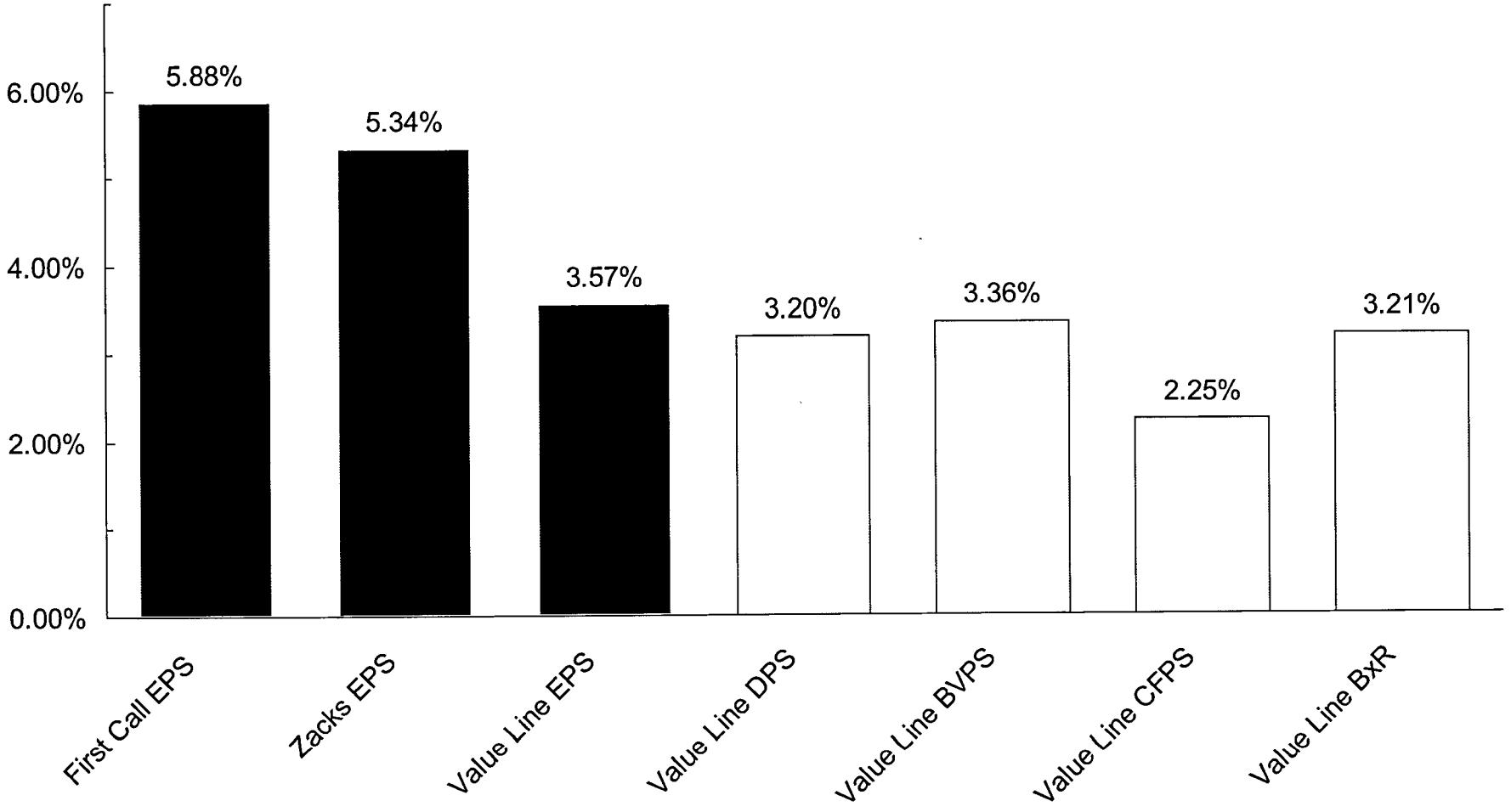
Historical Growth Rates



Earnings per Share=EPS
Dividends per Share=DPS
Book Values per Share=BVPS
Cash Flow per Share=CFPS
Percent Retained to Common Equity=BxR

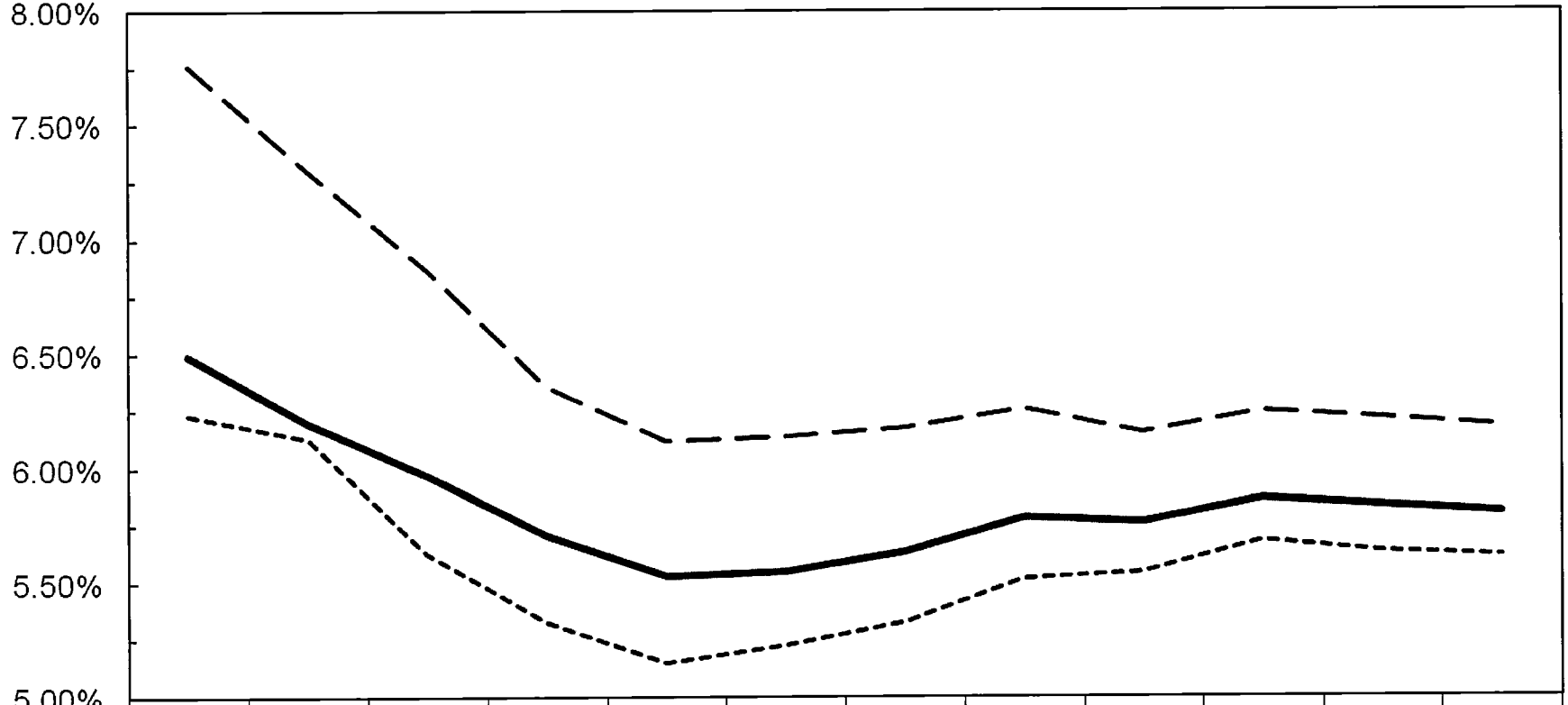
Electric Group

Five-Year Projected Growth Rates



Earnings per Share=EPS
Dividends per Share=DPS
Book Values per Share=BVPS
Cash Flow per Share=CFPS
Percent Retained to Common Equity=BxR

Interest Rates for
Investment Grade Public Utility Bonds



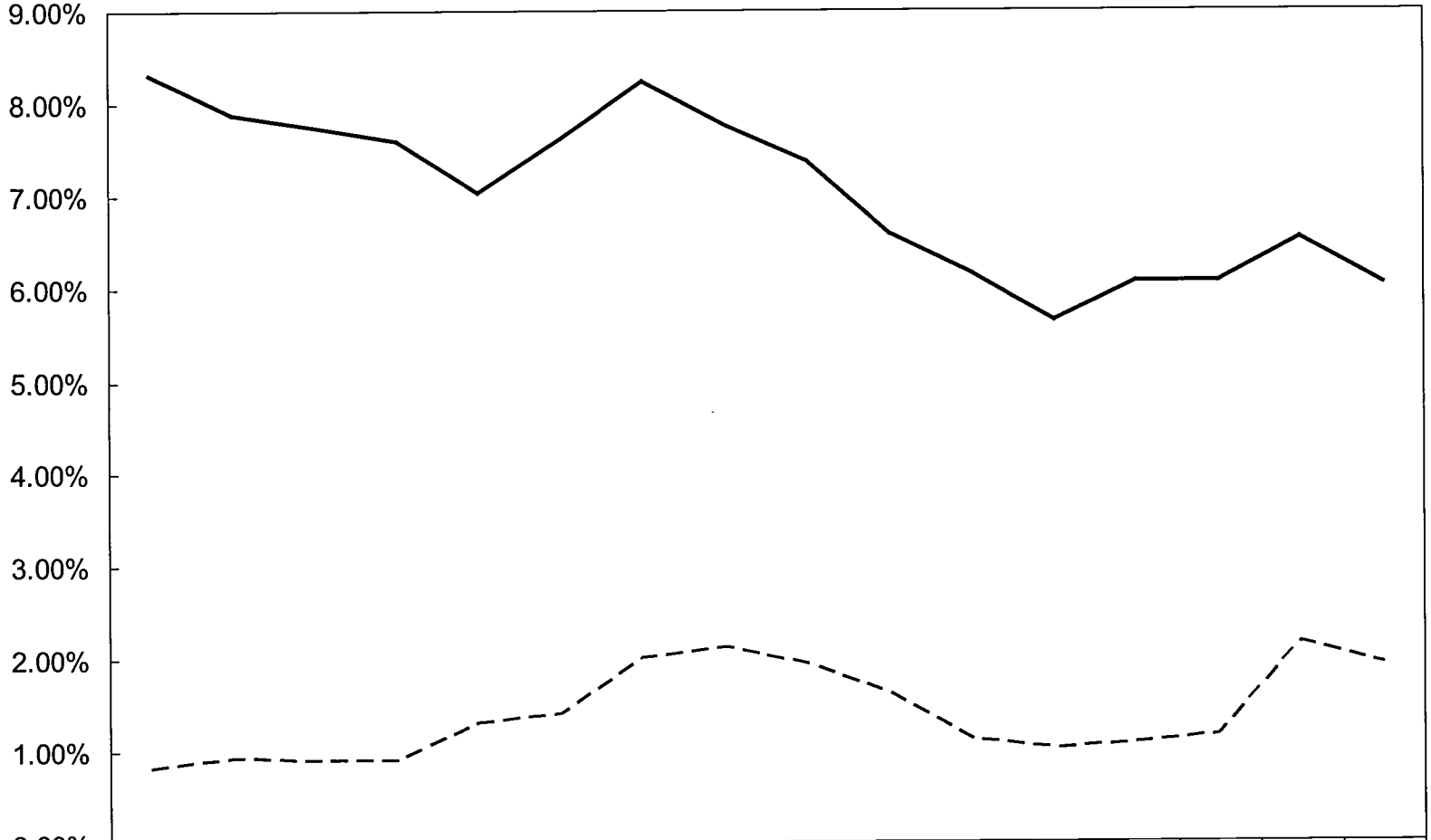
	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10	Apr-10
----Aa	6.23%	6.13%	5.63%	5.33%	5.15%	5.23%	5.33%	5.52%	5.55%	5.69%	5.64%	5.62%
——A	6.49%	6.20%	5.97%	5.71%	5.53%	5.55%	5.64%	5.79%	5.77%	5.87%	5.84%	5.81%
— –Baa	7.76%	7.30%	6.87%	6.36%	6.12%	6.14%	6.18%	6.26%	6.16%	6.25%	6.22%	6.19%

Interest Rates for Investment Grade Public Utility Bonds
Yearly for 2005-2009
and the Twelve Months Ended April 2010

Years	Aa Rated	A Rated	Baa Rated	Average
2005	5.44%	5.65%	5.93%	5.67%
2006	5.84%	6.07%	6.32%	6.08%
2007	5.94%	6.07%	6.33%	6.11%
2008	6.18%	6.53%	7.24%	6.65%
2009	5.75%	6.04%	7.06%	6.28%
Five-Year Average	5.83%	6.07%	6.58%	6.16%
Months				
May-09	6.23%	6.49%	7.76%	6.83%
Jun-09	6.13%	6.20%	7.30%	6.54%
Jul-09	5.63%	5.97%	6.87%	6.15%
Aug-09	5.33%	5.71%	6.36%	5.80%
Sep-09	5.15%	5.53%	6.12%	5.60%
Oct-09	5.23%	5.55%	6.14%	5.64%
Nov-09	5.33%	5.64%	6.18%	5.71%
Dec-09	5.52%	5.79%	6.26%	5.86%
Jan-10	5.55%	5.77%	6.16%	5.83%
Feb-10	5.69%	5.87%	6.25%	5.94%
Mar-10	5.64%	5.84%	6.22%	5.90%
Apr-10	5.62%	5.81%	6.19%	5.87%
Twelve-Month Average	5.59%	5.85%	6.48%	5.97%
Six-Month Average	5.56%	5.79%	6.21%	5.85%
Three-Month Average	5.65%	5.84%	6.22%	5.90%

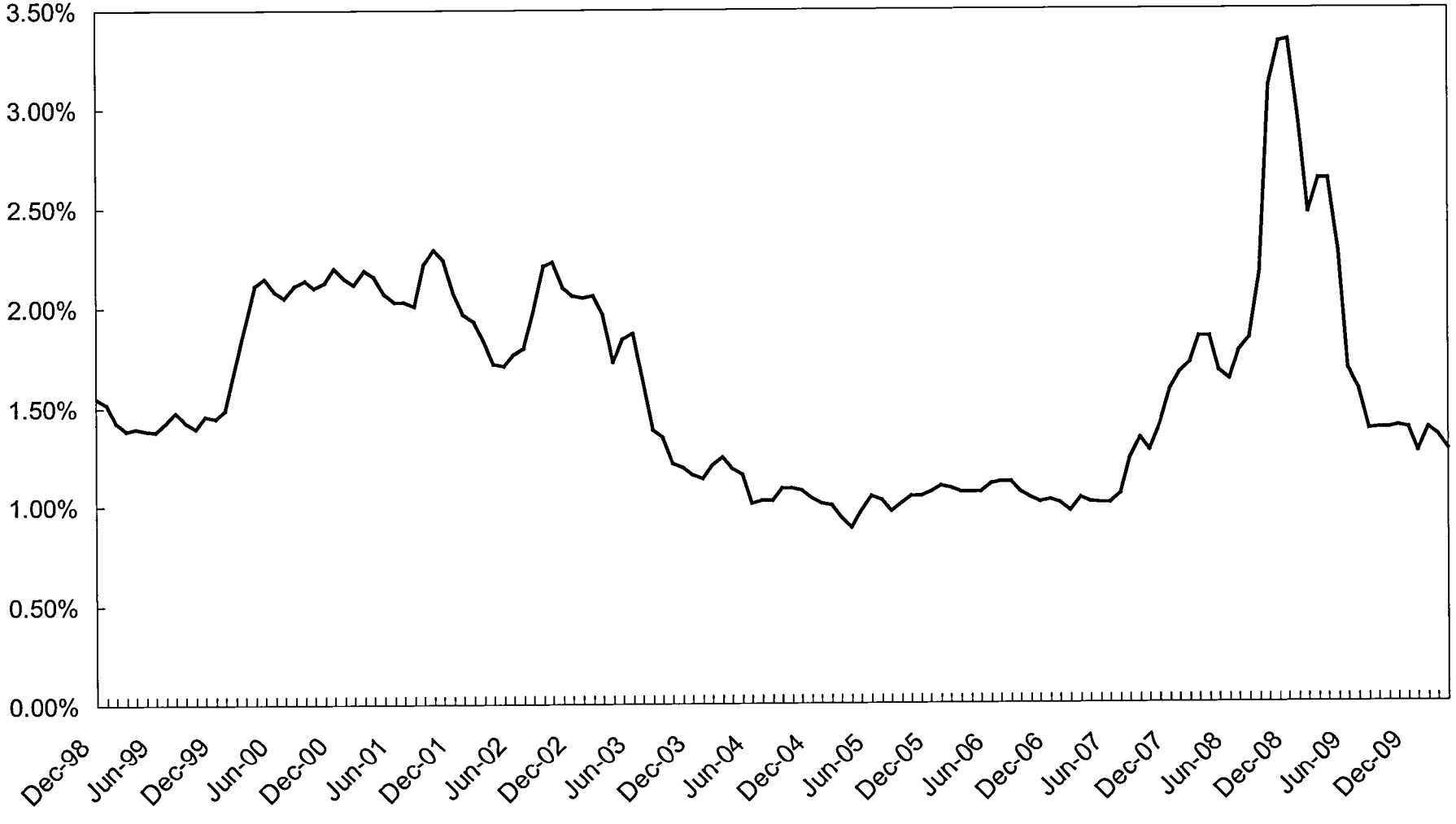
Source: Mergent Bond Record

Yields on
A-rated Public Utility Bonds and
Spreads over 20-Year Treasuries



	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
A-rated Public Utility	8.31%	7.89%	7.75%	7.60%	7.04%	7.62%	8.24%	7.76%	7.37%	6.58%	6.16%	5.65%	6.07%	6.07%	6.53%	6.04%
Spread vs. 20-year	0.82%	0.94%	0.92%	0.91%	1.32%	1.42%	2.01%	2.13%	1.94%	1.62%	1.12%	1.01%	1.08%	1.16%	2.17%	1.93%

Interest Rate Spreads
A-rated Public Utility Bonds
over 20-Year Treasuries



A rated Public Utility Bonds over 20-Year Treasuries

Year	A-rated Public Utility	20-Year Treasuries Yield	20-Year Treasuries Spread	Year	A-rated Public Utility	20-Year Treasuries Yield	20-Year Treasuries Spread	Year	A-rated Public Utility	20-Year Treasuries Yield	20-Year Treasuries Spread
Dec-98	6 91%	5 36%	1 55%								
Jan-99	6.97%	5.45%	1.52%	Jan-03	7.07%	5.02%	2.05%	Jan-07	5.96%	4 95%	1.01%
Feb-99	7.09%	5 66%	1.43%	Feb-03	6 93%	4 87%	2.06%	Feb-07	5.90%	4.93%	0.97%
Mar-99	7.26%	5.87%	1.39%	Mar-03	6.79%	4.82%	1.97%	Mar-07	5.85%	4.81%	1.04%
Apr-99	7.22%	5 82%	1.40%	Apr-03	6 64%	4.91%	1 73%	Apr-07	5 97%	4.95%	1.02%
May-99	7.47%	6.08%	1 39%	May-03	6.36%	4.52%	1.84%	May-07	5 99%	4.98%	1 01%
Jun-99	7.74%	6 36%	1.38%	Jun-03	6 21%	4.34%	1 87%	Jun-07	6.30%	5 29%	1.01%
Jul-99	7.71%	6.28%	1.43%	Jul-03	6.57%	4.92%	1.65%	Jul-07	6 25%	5 19%	1 06%
Aug-99	7 91%	6 43%	1.48%	Aug-03	6 78%	5 39%	1.39%	Aug-07	6 24%	5 00%	1.24%
Sep-99	7.93%	6 50%	1 43%	Sep-03	6 56%	5.21%	1.35%	Sep-07	6 18%	4 84%	1 34%
Oct-99	8 06%	6.66%	1.40%	Oct-03	6.43%	5 21%	1.22%	Oct-07	6.11%	4 83%	1.28%
Nov-99	7.94%	6 48%	1.46%	Nov-03	6.37%	5.17%	1.20%	Nov-07	5 97%	4 56%	1 41%
Dec-99	8.14%	6 69%	1.45%	Dec-03	6 27%	5 11%	1.16%	Dec-07	6 16%	4 57%	1 59%
Jan-00	8 35%	6.86%	1.49%	Jan-04	6.15%	5.01%	1.14%	Jan-08	6.02%	4.35%	1.67%
Feb-00	8 25%	6.54%	1.71%	Feb-04	6.15%	4.94%	1.21%	Feb-08	6.21%	4.49%	1.72%
Mar-00	8 28%	6.38%	1.90%	Mar-04	5.97%	4 72%	1.25%	Mar-08	6 21%	4 36%	1.85%
Apr-00	8.29%	6.18%	2.11%	Apr-04	6.35%	5.16%	1.19%	Apr-08	6 29%	4 44%	1 85%
May-00	8.70%	6 55%	2.15%	May-04	6 62%	5 46%	1.16%	May-08	6 28%	4 60%	1 68%
Jun-00	8 36%	6.28%	2 08%	Jun-04	6.46%	5.45%	1.01%	Jun-08	6.38%	4.74%	1.64%
Jul-00	8.25%	6 20%	2.05%	Jul-04	6.27%	5.24%	1.03%	Jul-08	6.40%	4.62%	1.78%
Aug-00	8.13%	6.02%	2.11%	Aug-04	6 14%	5 07%	1 07%	Aug-08	6 37%	4 53%	1 84%
Sep-00	8.23%	6 09%	2.14%	Sep-04	5 98%	4 89%	1 09%	Sep-08	6 49%	4 32%	2.17%
Oct-00	8.14%	6.04%	2 10%	Oct-04	5.94%	4 85%	1.09%	Oct-08	7.56%	4.45%	3 11%
Nov-00	8.11%	5 98%	2 13%	Nov-04	5.97%	4.89%	1.08%	Nov-08	7 60%	4 27%	3 33%
Dec-00	7.84%	5.64%	2.20%	Dec-04	5.92%	4.88%	1.04%	Dec-08	6.52%	3.18%	3.34%
Jan-01	7.80%	5 65%	2.15%	Jan-05	5 78%	4 77%	1.01%	Jan-09	6.39%	3.46%	2.93%
Feb-01	7.74%	5 62%	2 12%	Feb-05	5.61%	4 61%	1.00%	Feb-09	6 30%	3 83%	2 47%
Mar-01	7.68%	5.49%	2.19%	Mar-05	5.83%	4 89%	0.94%	Mar-09	6.42%	3.78%	2.64%
Apr-01	7 94%	5.78%	2.16%	Apr-05	5.64%	4.75%	0.89%	Apr-09	6.48%	3.84%	2.64%
May-01	7.99%	5 92%	2.07%	May-05	5 53%	4 56%	0 97%	May-09	6.49%	4.22%	2 27%
Jun-01	7.85%	5.82%	2.03%	Jun-05	5.40%	4.35%	1.05%	Jun-09	6.20%	4.51%	1.69%
Jul-01	7.78%	5 75%	2.03%	Jul-05	5.51%	4.48%	1.03%	Jul-09	5 97%	4 38%	1.59%
Aug-01	7 59%	5 58%	2.01%	Aug-05	5.50%	4 53%	0 97%	Aug-09	5.71%	4.33%	1.38%
Sep-01	7.75%	5 53%	2.22%	Sep-05	5 52%	4 51%	1 01%	Sep-09	5 53%	4 14%	1 39%
Oct-01	7.63%	5 34%	2 29%	Oct-05	5 79%	4 74%	1.05%	Oct-09	5 55%	4 16%	1 39%
Nov-01	7.57%	5.33%	2.24%	Nov-05	5.88%	4.83%	1.05%	Nov-09	5.64%	4.24%	1.40%
Dec-01	7 83%	5.76%	2.07%	Dec-05	5.80%	4.73%	1.07%	Dec-09	5.79%	4.40%	1.39%
Jan-02	7.66%	5 69%	1.97%	Jan-06	5.75%	4 65%	1.10%	Jan-10	5 77%	4 50%	1 27%
Feb-02	7.54%	5.61%	1.93%	Feb-06	5.82%	4.73%	1.09%	Feb-10	5.87%	4.48%	1.39%
Mar-02	7.76%	5 93%	1 83%	Mar-06	5 98%	4.91%	1.07%	Mar-10	5 84%	4.49%	1.35%
Apr-02	7.57%	5.85%	1.72%	Apr-06	6.29%	5.22%	1.07%	Apr-10	5.81%	4.53%	1.28%
May-02	7.52%	5 81%	1.71%	May-06	6 42%	5 35%	1.07%				
Jun-02	7.42%	5.65%	1.77%	Jun-06	6.40%	5.29%	1.11%				
Jul-02	7.31%	5.51%	1 80%	Jul-06	6.37%	5.25%	1.12%	Average			
Aug-02	7.17%	5.19%	1.98%	Aug-06	6.20%	5 08%	1.12%	12-months			1.48%
Sep-02	7.08%	4.87%	2.21%	Sep-06	6.00%	4.93%	1.07%	6-months			1.35%
Oct-02	7.23%	5 00%	2 23%	Oct-06	5 98%	4 94%	1.04%	3-months			1.34%
Nov-02	7.14%	5 04%	2 10%	Nov-06	5 80%	4.78%	1.02%				
Dec-02	7.07%	5 01%	2 06%	Dec-06	5.81%	4.78%	1 03%				

S&P Composite Index and S&P Public Utility Index
Long-Term Corporate and Public Utility Bonds
Yearly Total Returns
1928-2007

Year	S & P Composite Index	S & P Public Utility Index	Long Term Corporate Bonds	Public Utility Bonds
1928	43.61%	57.47%	2.84%	3.08%
1929	-8 42%	11 02%	3.27%	2.34%
1930	-24.90%	-21 96%	7 98%	4 74%
1931	-43 34%	-35 90%	-1.85%	-11.11%
1932	-8.19%	-0 54%	10.82%	7.25%
1933	53.99%	-21 87%	10 38%	-3.82%
1934	-1.44%	-20 41%	13 84%	22.61%
1935	47.67%	76.63%	9 61%	16 03%
1936	33.92%	20 69%	6 74%	8 30%
1937	-35 03%	-37.04%	2.75%	-4 05%
1938	31.12%	22.45%	6.13%	8.11%
1939	-0 41%	11.26%	3.97%	6.76%
1940	-9 78%	-17.15%	3.39%	4 45%
1941	-11.59%	-31.57%	2.73%	2.15%
1942	20.34%	15 39%	2.60%	3 81%
1943	25 90%	46 07%	2.83%	7.04%
1944	19.75%	18 03%	4 73%	3.29%
1945	36 44%	53 33%	4 08%	5.92%
1946	-8.07%	1.26%	1.72%	2 98%
1947	5 71%	-13 16%	-2.34%	-2.19%
1948	5 50%	4 01%	4.14%	2.65%
1949	18.79%	31.39%	3 31%	7.16%
1950	31.71%	3 25%	2.12%	2.01%
1951	24 02%	18.63%	-2 69%	-2.77%
1952	18.37%	19.25%	3 52%	2 99%
1953	-0 99%	7.85%	3.41%	2.08%
1954	52 62%	24 72%	5.39%	7.57%
1955	31.56%	11.26%	0 48%	0.12%
1956	6.56%	5 06%	-6.81%	-6.25%
1957	-10 78%	6.36%	8.71%	3.58%
1958	43.36%	40 70%	-2 22%	0.18%
1959	11.96%	7 49%	-0 97%	-2 29%
1960	0.47%	20.26%	9.07%	9 01%
1961	26 89%	29.33%	4 82%	4.65%
1962	-8.73%	-2.44%	7 95%	6 55%
1963	22 80%	12.36%	2.19%	3 44%
1964	16 48%	15.91%	4 77%	4 94%
1965	12 45%	4 67%	-0.46%	0.50%
1966	-10.06%	-4 48%	0 20%	-3.45%
1967	23 98%	-0.63%	-4 95%	-3 63%
1968	11.06%	10.32%	2 57%	1 87%
1969	-8 50%	-15 42%	-8.09%	-6.66%
1970	4 01%	16.56%	18 37%	15.90%
1971	14.31%	2.41%	11.01%	11.59%
1972	18 98%	8.15%	7.26%	7.19%
1973	-14 66%	-18 07%	1.14%	2 42%
1974	-26.47%	-21 55%	-3 06%	-5 28%
1975	37.20%	44 49%	14 64%	15.50%
1976	23 84%	31.81%	18.65%	19 04%
1977	-7.18%	8.64%	1.71%	5 22%
1978	6.56%	-3.71%	-0 07%	-0.98%
1979	18 44%	13.58%	-4.18%	-2.75%
1980	32.42%	15.08%	-2 76%	-0.23%
1981	-4 91%	11 74%	-1.24%	4.27%
1982	21.41%	26.52%	42.56%	33.52%
1983	22.51%	20 01%	6.26%	10.33%
1984	6 27%	26 04%	16 86%	14.82%
1985	32.16%	33 05%	30 09%	26.48%
1986	18 47%	28 53%	19 85%	18.16%
1987	5 23%	-2 92%	-0 27%	3.02%
1988	16.81%	18.27%	10.70%	10 19%
1989	31.49%	47.80%	16.23%	15 61%
1990	-3 17%	-2.57%	6.78%	8.13%
1991	30 55%	14 61%	19.89%	19.25%
1992	7 67%	8.10%	9.39%	8.65%
1993	9.99%	14 41%	13 19%	10.59%
1994	1.31%	-7.94%	-5.76%	-4.72%
1995	37.43%	42.15%	27 20%	22 81%
1996	23.07%	3.14%	1 40%	3.04%
1997	33 36%	24 69%	12.95%	11.39%
1998	28 58%	14.82%	10.76%	9.44%
1999	21.04%	-8.85%	-7.45%	-1.69%
2000	-9 11%	59 70%	12.87%	9.45%
2001	-11 88%	-30 41%	10.65%	5.85%
2002	-22.10%	-30 04%	16 33%	1.63%
2003	28.70%	26 11%	5 27%	10.01%
2004	10.87%	24.22%	8.72%	6 03%
2005	4.91%	16.79%	5 87%	3 02%
2006	15.80%	20.95%	3 24%	3 94%
2007	5 49%	19 39%	2.60%	5.20%
Geometric Mean	10 04%	8 92%	5 81%	5.45%
Arithmetic Mean	11.95%	11 24%	6.13%	5.72%
Standard Deviation	20.02%	22.43%	8.52%	7.84%
Median	13 38%	12 05%	4 11%	4.55%

Tabulation of Risk Rate Differentials for
S&P Public Utility Index and Public Utility Bonds
For the Years 1928-2007, 1952-2007, 1974-2007, and 1979-2007

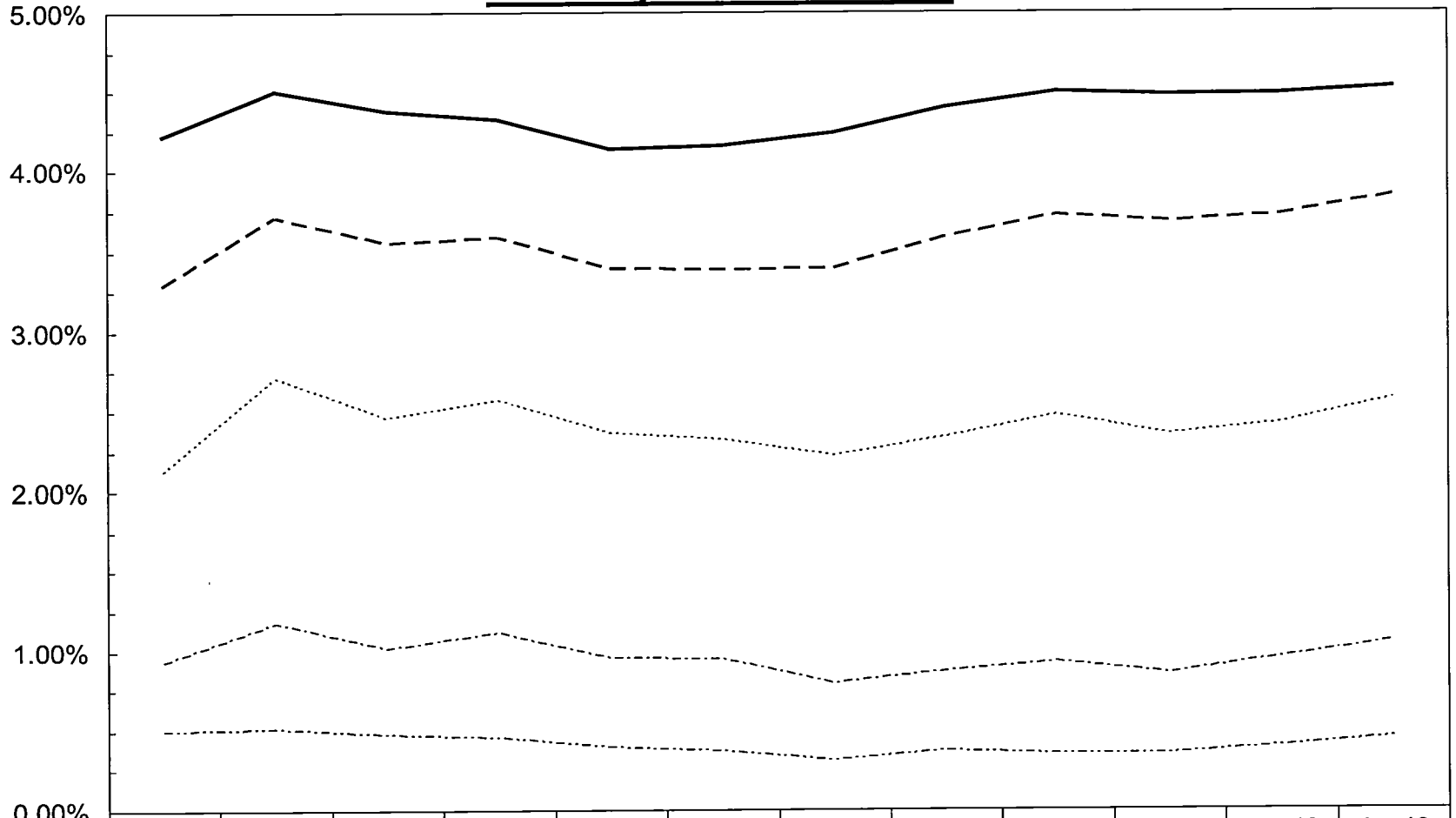
Total Returns	Range: Geometric Mean	Range: Median	Midpoint	Point Estimate: Arithmetic Mean	Average of the Midpoint of Range and Point Estimate
1928-2007					
S&P Public Utility Index	8.92%	12.05%		11.24%	
Public Utility Bonds	5.45%	4.55%		5.72%	
Risk Differential	3.47%	7.50%	5.49%	5.52%	5.51%
1952-2007					
S&P Public Utility Index	11.14%	14.00%		12.65%	
Public Utility Bonds	6.15%	5.07%		6.45%	
Risk Differential	4.99%	8.93%	6.96%	6.20%	6.58%
1974-2007					
S&P Public Utility Index	12.98%	15.94%		14.90%	
Public Utility Bonds	8.45%	8.39%		8.79%	
Risk Differential	4.53%	7.55%	6.04%	6.11%	6.08%
1979-2007					
S&P Public Utility Index	13.62%	16.79%		15.41%	
Public Utility Bonds	8.83%	8.65%		9.15%	
Risk Differential	4.79%	8.14%	6.47%	6.26%	6.37%

Value Line Betas

Electric Group	
CH Energy Group	0.65
Central Vermont P.S.	0.75
Consolidated Edison	0.65
Northeast Utilities	0.70
NSTAR	0.65
PEPCO Holdings	0.80
UIL Holdings	0.70
Average	0.70

Source of Information:
Value Line Investment Survey
February 26, 2010

Yields on
Treasury Notes & Bonds



	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10	Apr-10
1-Year	0.50%	0.51%	0.48%	0.46%	0.40%	0.37%	0.31%	0.37%	0.35%	0.35%	0.40%	0.45%
2-Year	0.93%	1.18%	1.02%	1.12%	0.96%	0.95%	0.80%	0.87%	0.93%	0.86%	0.96%	1.06%
5-Year	2.13%	2.71%	2.46%	2.57%	2.37%	2.33%	2.23%	2.34%	2.48%	2.36%	2.43%	2.58%
10-Year	3.29%	3.72%	3.56%	3.59%	3.40%	3.39%	3.40%	3.59%	3.73%	3.69%	3.73%	3.85%
20-Year	4.22%	4.51%	4.38%	4.33%	4.14%	4.16%	4.24%	4.40%	4.50%	4.48%	4.49%	4.53%

Yields for Treasury Constant Maturities
Yearly for 2005-2009
and the Twelve Months Ended April 2010

Years	1-Year	2-Year	3-Year	5-Year	7-Year	10-Year	20-Year
2005	3.62%	3.85%	3.93%	4.05%	4.15%	4.29%	4.64%
2006	4.93%	4.82%	4.77%	4.75%	4.76%	4.79%	4.99%
2007	4.52%	4.36%	4.34%	4.43%	4.50%	4.63%	4.91%
2008	1.82%	2.00%	2.24%	2.80%	3.17%	3.67%	4.36%
2009	0.47%	0.96%	1.43%	2.19%	2.81%	3.26%	4.11%
Five-Year Average	3.07%	3.20%	3.34%	3.64%	3.88%	4.13%	4.60%
Months							
May-09	0.50%	0.93%	1.39%	2.13%	2.81%	3.29%	4.22%
Jun-09	0.51%	1.18%	1.76%	2.71%	3.37%	3.72%	4.51%
Jul-09	0.48%	1.02%	1.55%	2.46%	3.14%	3.56%	4.38%
Aug-09	0.46%	1.12%	1.65%	2.57%	3.21%	3.59%	4.33%
Sep-09	0.40%	0.96%	1.48%	2.37%	3.02%	3.40%	4.14%
Oct-09	0.37%	0.95%	1.46%	2.33%	2.96%	3.39%	4.16%
Nov-09	0.31%	0.80%	1.32%	2.23%	2.92%	3.40%	4.24%
Dec-09	0.37%	0.87%	1.38%	2.34%	3.07%	3.59%	4.40%
Jan-10	0.35%	0.93%	1.49%	2.48%	3.21%	3.73%	4.50%
Feb-10	0.35%	0.86%	1.40%	2.36%	3.12%	3.69%	4.48%
Mar-10	0.40%	0.96%	1.51%	2.43%	3.16%	3.73%	4.49%
Apr-10	0.45%	1.06%	1.64%	2.58%	3.28%	3.85%	4.53%
Twelve-Month Average	0.41%	0.97%	1.50%	2.42%	3.11%	3.58%	4.37%
Six-Month Average	0.37%	0.91%	1.46%	2.40%	3.13%	3.67%	4.44%
Three-Month Average	0.40%	0.96%	1.52%	2.46%	3.19%	3.76%	4.50%

Source: Federal Reserve statistical release H.15

Measures of the Risk-Free Rate

The forecast of Treasury yields
per the consensus of nearly 50 economists
reported in the Blue Chip Financial Forecasts dated May 1, 2010

Year	Quarter	1-Year Treasury Bill	2-Year Treasury Note	5-Year Treasury Note	10-Year Treasury Note	30-Year Treasury Bond
2010	Second	0.5%	1.1%	2.6%	3.9%	4.7%
2010	Third	0.7%	1.4%	2.8%	4.0%	4.8%
2010	Fourth	1.0%	1.7%	3.0%	4.2%	5.0%
2011	First	1.4%	2.0%	3.3%	4.3%	5.1%
2011	Second	1.8%	2.3%	3.5%	4.5%	5.2%
2011	Third	2.2%	2.7%	3.7%	4.6%	5.3%

THE VALUE LINE Investment Survey®

Part 1 Summary & Index

May 21, 2010

TABLE OF SUMMARY & INDEX CONTENTS

The Median of Estimated
PRICE-EARNINGS RATIOS
of all stocks with earnings

17.4

26 Weeks Ago	Market Low	Market High
17.1	3-9-09 10.3	7-13-07 19.7

The Median of Estimated
DIVIDEND YIELDS
(next 12 months) of all dividend paying stocks under review

1.9%

26 Weeks Ago	Market Low	Market High
2.1%	3-9-09 4.0%	7-13-07 1.6%

The Estimated Median Price
APPRECIATION POTENTIAL
of all 1700 stocks in the hypothesized economic environment 3 to 5 years hence

55%

26 Weeks Ago	Market Low	Market High
55%	3-9-09 185%	7-13-07 35%

ANALYSES OF INDUSTRIES IN ALPHABETICAL ORDER WITH PAGE NUMBER

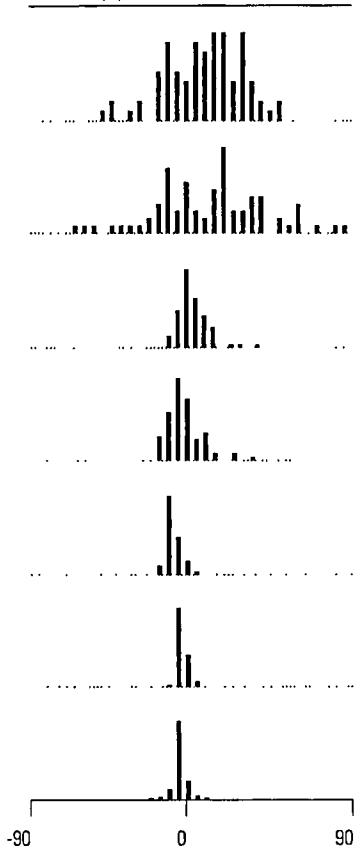
Numeral in parenthesis after the industry is rank for probable performance (next 12 months).

*Reviewed in this week's issue.

In three parts: This is Part 1, the Summary & Index. Part 2 is Selection & Opinion. Part 3 is Ratings & Reports. Volume LXV, No. 39.
Published weekly by VALUE LINE PUBLISHING, INC. 220 East 42nd Street, New York, N.Y. 10017-5891

Table 2-1: Basic Series: Summary Statistics of Annual Total Returns

Series	Geometric Mean (%)	Arithmetic Mean (%)	Standard Deviation (%)	Distribution (%)
Large Company Stocks	9 6	11.7	20.6	
Small Company Stocks*	11.7	16.4	33.0	
Long-Term Corporate Bonds	5.9	6.2	8.4	
Long-Term Government Bonds	5 7	6.1	9.4	
Intermediare-Term Government Bonds	5.4	5.6	5 7	
U.S. Treasury Bills	3.7	3.8	3.1	
Inflation	3.0	3 1	4 2	



Data from 1926–2008 * The 1933 Small Company Stocks Total Return was 142 9 percent

Table 10-1: Building Blocks for Expected Return Construction

	Value (%)
Yields (Riskless Rates)[1]	
Long-Term (20-year) U S Treasury Coupon Bond Yield	3 0
Intermediate-Term (5-year) U S Treasury Coupon Note Yield	1 3
Short-Term (30-day) U S Treasury Bill Yield	0 1
Fixed Income Risk Premia[1, †]	
Expected default premium *long-term corporate bond total returns minus long-term government bond total returns*	0 1
Expected long-term horizon premium *long-term government bond income returns minus U S. Treasury bill total returns**	1 4
Expected intermediate-term horizon premium *intermediate-term government bond income returns minus U S Treasury bill total returns**	1 0
Equity Risk Premia[†]	
Long-horizon expected equity risk premium *large company stock total returns minus long-term government bond income returns*	6.5
Intermediate-horizon expected equity risk premium *large company stock total returns minus intermediate-term government bond income returns*	6 9
Short-horizon expected equity risk premium. *large company stock total returns minus U S Treasury bill total returns**	7 9
Small Stock Premium: *small company stock total return minus large company stock total return*	4.8

1 As of December 31, 2008 Maturities are approximate Expected risk premia for fixed income and equities are based on the differences of historical arithmetic mean returns from 1926–2008

†We would prefer to use the 1970–2008 time range for calculating fixed income premia to reflect that bond volatility has increased over time However, abnormal returns in 2008 make using a short time frame for forward-looking expectations unrealistic

*For U S Treasury bills, the income return and total return are the same

Comparable Earnings Approach
Using Non-Utility Companies with
Timeliness of 3 & 4; Safety Rank of 1, 2 & 3; Financial Strength of B, B+, B++, A & A+;
Price Stability of 80 to100; Betas of .65 to .80; and Technical Rank of 1, 2 & 3

Company	Industry	Timeliness Rank	Safety Rank	Financial Strength	Price Stability	Beta	Technical Rank
Alleghany Corp.	INSPRPTY	3	2	A	85	0.80	3
Alliant Techsystems	DEFENSE	3	3	B+	95	0.80	3
Aon Corp.	FINSERV	3	2	A	95	0.70	2
AutoZone Inc.	RETAUTO	3	3	B	85	0.75	2
BJ's Wholesale Club	RETAIL	3	2	A	80	0.70	2
Beckman Coulter	MEDSUPPL	3	2	A	90	0.75	3
Berkley (W.R.)	INSPRPTY	4	3	B+	90	0.70	2
Berkshire Hathaway	INSPRPTY	3	1	A+	95	0.75	2
Bristol-Myers Squibb	DRUG	3	1	A	90	0.75	3
Brown-Forman 'B'	BEVERAGE	3	1	A+	95	0.70	3
CACI Int'l	SOFTWARE	3	3	B++	80	0.75	3
CVS Caremark Corp.	DRUGSTOR	3	1	A	90	0.80	2
Capitol Fed. Fin'l	THRIFT	3	2	B++	95	0.65	1
Casey's Gen'l Stores	GROCERY	3	3	B+	80	0.75	2
Clorox Co.	HOUSEPRD	3	2	B++	100	0.65	2
Coca-Cola Bottling	BEVERAGE	3	3	B	85	0.70	3
Commerce Bancshs.	BANKMID	3	1	A	95	0.80	2
ConAgra Foods	FOODPROC	3	1	A	95	0.65	3
Costco Wholesale	RETAIL	3	1	A	95	0.75	3
Del Monte Foods	FOODPROC	3	3	B	90	0.70	3
Dun & Bradstreet	INFOSER	3	3	B	100	0.70	2
EarthLink Inc.	INTERNET	4	3	B	85	0.70	3
Ecolab Inc.	CHEMSPEC	3	1	A	95	0.80	3
Endo Pharmac. Hldgs.	DRUG	3	3	B++	80	0.65	3
Erie Indemnity Co.	INSPRPTY	4	2	B++	100	0.70	3
G&K Services `A'	INDUSRV	4	3	B+	85	0.80	2
Gallagher (Arthur J.)	FINSERV	4	1	A	95	0.70	3
Genuine Parts	AUTO-OEM	4	1	A+	95	0.80	3
Genzyme Corp.	DRUG	4	3	B+	85	0.65	2
Gilead Sciences	DRUG	3	2	A	90	0.65	2
Henry (Jack) & Assoc.	SOFTWARE	3	2	B++	90	0 80	3
Hershey Co.	FOODPROC	3	2	B++	100	0.65	2
Hewitt Associates 'A'	HUMAN	3	3	B+	90	0.75	3
Hudson City Bancorp	THRIFT	3	3	B+	90	0.80	2
J&J Snack Foods	FOODPROC	3	2	B++	90	0.70	3
Kraft Foods	FOODPROC	3	1	A+	100	0.65	2
Laboratory Corp.	MEDSERV	3	1	A	100	0.65	2
Lincare Holdings	MEDSERV	3	1	A	90	0.65	2
Marsh & McLennan	FINSERV	3	3	B	90	0.75	3
Matthews Int'l	FUNL SVC	4	3	B+	90	0.80	3
Merck & Co.	DRUG	3	2	A	80	0.80	3
Mercury General	INSPRPTY	3	2	B++	95	0.70	2
Northrop Grumman	DEFENSE	3	1	A+	95	0.80	3
Owens & Minor	MEDSUPPL	3	2	A	90	0.70	3
Pfizer Inc.	DRUG	4	1	A+	95	0.75	3
Quest Diagnostics	MEDSERV	3	2	B++	95	0.65	2
RLI Corp.	INSPRPTY	3	2	B++	90	0.80	3
Safeway Inc.	GROCERY	4	2	B++	95	0.70	2
Sherwin-Williams	CHEMSPEC	3	2	A	90	0.70	2
Silgan Holdings	PACKAGE	3	3	B+	90	0.80	2
Stericycle Inc.	ENVIRONM	3	3	B+	90	0.70	2
Techne Corp.	BIOTECH	3	1	A+	95	0.75	3
Teleflex Inc.	DIVERSIF	3	2	A	90	0.80	2
Tootsie Roll Ind.	FOODPROC	3	1	A+	100	0.70	2
WD-40 Co.	HOUSEPRD	3	2	B++	85	0.75	2
Walgreen Co.	DRUGSTOR	3	1	A+	95	0.75	3
Washington Post	NWSPAPER	3	2	A	85	0.80	2
Waste Management	ENVIRONM	3	1	A	95	0.80	3
Weis Markets	GROCERY	4	1	A	95	0.65	2
West Pharmac. Svcs.	MEDSUPPL	3	3	B+	80	0.80	3
Wolverine World Wide	SHOE	3	2	A	80	0 80	3
Average		3	2	B++	91	0.73	2
Electric Group	Average	3	2	B++	95	0.70	2

Source of Information: Value Line Investment Survey for Windows, April 2010

Comparable Earnings Approach
Five -Year Average Historical Earned Returns
for Years 2005-2009 and
Projected 3-5 Year Returns

Company	2005	2006	2007	2008	2009	Average	Projected 2013-15
Alleghany Corp.	NMF	9.6%	8.8%	4.4%	5.0%	7.0%	6.5%
Alliant Techsystems	24.5%	31.9%	30.5%	42.9%	28.5%	31.7%	11.5%
Aon Corp.	12.1%	12.2%	10.9%	11.7%	11.8%	11.7%	14.0%
AutoZone Inc.	NMF	NMF	NMF	NMF	NMF	-	NMF
BJ's Wholesale Club	12.4%	10.0%	12.0%	13.4%	12.5%	12.1%	10.5%
Beckman Coulter	15.8%	13.5%	14.2%	16.3%	14.0%	14.8%	13.0%
Berkley (W.R.)	20.7%	20.8%	20.6%	16.5%	10.0%	17.7%	17.0%
Berkshire Hathaway	9.3%	10.2%	10.9%	4.6%	5.9%	8 2%	8.5%
Bristol-Myers Squibb	26.8%	13.6%	20.5%	25.7%	23.5%	22.0%	20.0%
Brown-Forman 'B'	22.9%	24.8%	25.5%	24.0%	25.0%	24.4%	21.5%
CACI Int'l	13.9%	11.4%	9.6%	9.1%	9.6%	10.7%	10.5%
CVS Caremark Corp.	14.1%	13.5%	8.4%	10.4%	10.6%	11.4%	10.5%
Capitol Fed. Fin'l	7.5%	5.6%	3.7%	5.8%	7.3%	6.0%	7.0%
Casey's Gen'l Stores	12.0%	10.6%	13.1%	12.7%	14.5%	12.6%	11.5%
Clorox Co.	-	-	NMF	NMF	NMF	-	58.5%
Coca-Cola Bottling	30.5%	24.7%	16.5%	21.1%	46.5%	27.9%	20.0%
Commerce Bancshs.	16.7%	15.2%	13.5%	12.0%	9.0%	13.3%	11.0%
ConAgra Foods	14.5%	12.8%	14.9%	9.7%	14.7%	13.3%	15.5%
Costco Wholesale	11.1%	12.1%	13.9%	14.0%	10.8%	12.4%	13.5%
Del Monte Foods	10.4%	10.5%	10.0%	9.2%	12.0%	10.4%	11.5%
Dun & Bradstreet	NMF	-	-	-	NMF	-	NMF
EarthLink Inc.	27.4%	1.1%	NMF	44.2%	41.0%	28.4%	13.0%
Ecolab Inc.	19.4%	21.9%	21.5%	29.5%	24.0%	23.3%	25.5%
Endo Pharmac. Hldgs.	24.0%	13.2%	17.6%	23.2%	12.0%	18.0%	11.5%
Erie Indemnity Co.	18.1%	17.6%	20.6%	18.0%	12.1%	17.3%	20.0%
G&K Services `A'	8.4%	7.6%	7.3%	8.3%	7.3%	7.8%	8.0%
Gallagher (Arthur J.)	39.9%	15.9%	21.6%	15.1%	14.9%	21.5%	20.0%
Genuine Parts	16.2%	18.6%	18.6%	20.5%	15.2%	17.8%	16.0%
Genzyme Corp.	8.6%	NMF	7.3%	5.8%	6.0%	6.9%	11.0%
Gilead Sciences	26.2%	64.0%	46.7%	48.4%	41.5%	45.4%	33.5%
Henry (Jack) & Assoc.	14.6%	15.6%	17.5%	17.5%	16.5%	16.3%	16.0%
Hershey Co.	55.6%	81.8%	81.3%	NMF	93.0%	77.9%	42.5%
Hewitt Associates 'A'	11.1%	NMF	NMF	28.9%	30.8%	23.6%	18.0%
Hudson City Bancorp	5.3%	5.9%	6.4%	9.0%	10.0%	7.3%	10.0%
J&J Snack Foods	11.1%	11.2%	10.9%	8.8%	12.0%	10.8%	12.5%
Kraft Foods	10.8%	11.2%	10.6%	12.8%	11.5%	11.4%	10.5%
Laboratory Corp.	20.5%	22.2%	29.4%	30.4%	25.3%	25.6%	19.0%
Lincare Holdings	18.8%	19.2%	30.8%	24.5%	15.2%	21.7%	19.5%
Marsh & McLennan	13.5%	14.1%	6.9%	NMF	10.3%	11.2%	14.5%
Matthews Int'l	17.9%	16.6%	16.1%	17.9%	15.5%	16.8%	16.0%
Merck & Co.	31.1%	31.4%	18.0%	41.6%	31.5%	30.7%	22.5%
Mercury General	15.1%	11.8%	12.0%	7.7%	10.0%	11.3%	10.0%
Northrop Grumman	7.4%	9.2%	9.8%	14.9%	12.4%	10.7%	16.5%
Owens & Minor	13.0%	10.2%	11.8%	14.7%	14.1%	12.8%	13.5%
Pfizer Inc.	22.9%	21.0%	23.5%	13.9%	13.5%	19.0%	14.5%
Quest Diagnostics	19.8%	21.2%	16.7%	17.8%	18.3%	18.8%	15.5%
RLI Corp.	14.0%	14.5%	21.5%	15.3%	12.0%	15.5%	11.0%
Safeway Inc.	12.8%	13.7%	13.3%	14.2%	11.0%	13.0%	14.0%
Sherwin-Williams	26.8%	28.9%	34.5%	29.7%	29.2%	29.8%	27.5%
Silgan Holdings	34.6%	29.8%	25.3%	26.9%	23.2%	28.0%	17.0%
Stericycle Inc.	17.8%	17.4%	18.0%	22.8%	21.2%	19.4%	15.0%
Techne Corp.	24.7%	21.6%	19.4%	21.3%	23.1%	22.0%	20.0%
Teleflex Inc.	13.1%	12.8%	11.5%	12.9%	9.0%	11.9%	11.5%
Tootsie Roll Ind.	10.6%	10.5%	8.1%	6.1%	8.0%	8.7%	8.0%
WD-40 Co.	21.6%	18.2%	18.7%	17.4%	15.2%	18.2%	16.5%
Walgreen Co.	17.5%	17.3%	18.4%	16.8%	14.0%	16 8%	14.0%
Washington Post	11.9%	10.4%	8.3%	6.3%	5.5%	9.0%	7.0%
Waste Management	14.3%	16.0%	18.6%	18.4%	15.0%	16.5%	17.0%
Weis Markets	10.5%	8.9%	7.1%	7.1%	9.5%	8.6%	9.0%
West Pharmac. Svcs.	13.6%	15.7%	17.0%	16.8%	13.5%	15.3%	14.0%
Wolverine World Wide	16.1%	16.4%	19.4%	22.3%	17.5%	18.3%	17.0%
Average						17.8%	15.9%
Average (excluding values >20%)						13.0%	12.9%