STATE OF NEW JERSEY
OFFICE OF ADMINISTRATIVE LAW
BEFORE THE HONORABLE GAIL M. COOKSON, ALJ

I/M/O THE PETITION OF	)	
SOUTH JERSEY GAS FOR APPROVAL	)	
OF INCREASED BASE TARIFF RATES	)	
AND CHARGES FOR GAS SERVICE	)	**BPU DOCKET No. GR10010035**
AND OTHER TARIFF REVISIONS	)	**OAL DOCKET No. PUC-01598-2010N**
	)	
	)	
	)	

DIRECT TESTIMONY OF MATTHEW I. KAHAL ON BEHALF OF THE NEW JERSEY DEPARTMENT OF THE PUBLIC ADVOCATE, DIVISION OF RATE COUNSEL

STEFANIE A. BRAND, ESQ.
ACTING PUBLIC ADVOCATE OF NEW JERSEY
AND DIRECTOR, DIVISION OF RATE COUNSEL

DIVISION OF RATE COUNSEL
31 Clinton Street, 11th Floor
P. O. Box 46005
Newark, New Jersey 07101
Phone: 973-648-2690
Email: njratepayer@rpa.state.nj.us

FILED: MAY 28, 2010

TABLE OF CONTENTS

PAGE

I. QUALIFICATIONS

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Matthew I. Kahal. I am employed as an independent consultant retained in this matter by the Division of the Rate Counsel (Rate Counsel). My business address is 10480 Little Patuxent Parkway, Suite 300, Columbia, Maryland 21044.

Q. PLEASE STATE YOUR EDUCATIONAL BACKGROUND.

A. I hold B.A. and M.A. degrees in economics from the University of Maryland and have completed course work and examination requirements for the Ph.D. degree in economics. My areas of academic concentration included industrial organization, economic development and econometrics.

Q. WHAT IS YOUR PROFESSIONAL BACKGROUND?

A. I have been employed in the area of energy, utility and telecommunications consulting for the past 30 years working on a wide range of topics. Most of my work has focused on electric utility integrated planning, plant licensing, environmental issues, mergers and financial issues. I was a co-founder of Exeter Associates, and from 1981 to 2001 I was employed at Exeter Associates as a Senior Economist and Principal. During that time, I took the lead role at Exeter in performing cost of capital and financial studies. In recent years, the focus of much of my professional work has shifted to electric utility restructuring and competition.

Prior to entering consulting, I served on the Economics Department faculties at the University of Maryland (College Park) and Montgomery College teaching courses on economic principles, development economics and business.

A complete description of my professional background is provided in Appendix A.

Q. HAVE YOU PREVIOUSLY TESTIFIED AS AN EXPERT WITNESS BEFORE UTILITY REGULATORY COMMISSIONS?

A. Yes. I have testified before approximately two-dozen state and federal utility commissions and federal court in more than 350 separate regulatory cases. My testimony has addressed a variety of subjects including fair rate of return, resource planning, financial assessments, load forecasting, competitive restructuring, rate design, purchased power contracts, merger economics and other regulatory policy issues. These cases have involved electric, gas, water and telephone utilities. In 1989, I testified before the U. S. House of Representatives, Committee on Ways and Means, on proposed federal tax legislation affecting utilities. A list of these cases may be found in Appendix A, with my statement of qualifications.

Q. WHAT PROFESSIONAL ACTIVITIES HAVE YOU ENGAGED IN SINCE LEAVING EXETER AS A PRINCIPAL IN 2001?

A. Since 2001,1 have worked on a variety of consulting assignments pertaining to electric restructuring, purchase power contracts, environmental controls, cost of capital and other regulatory issues. Current and recent clients include the U.S. Department of Justice, U.S. Air Force, U.S. Department of Energy, the Federal Energy Regulatory Commission, Connecticut Attorney General, Pennsylvania Office of Consumer Advocate, New Jersey Division of Rate Counsel, Rhode Island Division of Public Utilities, Louisiana Public Service Commission, Arkansas Public Service Commission, the Maine Public Advocate, Maryland Department of Natural Resources and Energy Administration, and MCI.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE NEW JERSEY BOARD OF PUBLIC UTILITIES?

A. Yes. I have testified on cost of capital and other matters before the Board of Public Utilities (Board or BPU) in gas, water and electric cases during the past 20 years. A listing of those cases is provided in my attached Statement of Qualifications. This includes the submission of testimony on rate of return issues in the recent electric and gas service rate cases of New Jersey Natural Gas Company (BPU Docket No. GR070110889), Elizabethtown Gas (BPU Docket No. GR09030195) and Public Service Electric and Gas Company (BPU Docket Nos. GR05100845 and GR09050422).

II. OVERVIEW

A. Summary of Recommendation

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

A. I have been asked by the Division of Rate Counsel ("Rate Counsel") to develop a recommendation concerning the fair rate of return on the gas distribution utility rate base of South Jersey Gas Company ("SJG" or "the Company"). This includes both a review of the Company's proposal concerning rate of return and the preparation of an independent study of the cost of common equity. I am providing my recommendation to Rate Counsel and its consultants for use in calculating the test year annual revenue requirement in this case.

SJG is not an independent company, nor is it publically traded. It is wholly-owned by South Jersey Industries, Inc. ("SJI"), a holding company with both non-regulated and regulated operations. However, SJG accounts for the majority of the total business of the consolidated SJI.

Q. WHAT IS THE COMPANY'S RATE OF RETURN PROPOSAL IN THIS CASE?

A. The Company's overall rate of return, capital structure and debt costs are sponsored by SJG's witness, Mr. Paul Moul. The recently-filed 9+3 update produces a requested return on rate base of 8.91 percent, as shown in Table 1 below. This is based on SJG's projected capitalization at June 30, 2010 and *excludes* any recommendation of short-term debt. The 9+3 update differs only very slightly from the rate of return request in the Company's original filed case.

Table 1 SJG Proposed Rate of Return – 9+3 Update			
Capital Type	% Total	Cost Rate	Weighted Cost
Long-Term Debt	45.73%	5.83%	2.67%
Common Equity	54.27	11.5	6.24
Total	**100%**	--	**8.91%**

The 11.5 percent return on equity ("ROE") request is based on Mr. Moul's cost of equity studies. Given the procedural schedule in this case, I anticipate that there will be a further opportunity to update capital structure and rate of return using more current information, including actual June 30, 2010 data. Hence, cost of capital results presented at this time based on projections should be considered provisional.

Q. HOW DOES THE UPDATED REQUEST OF 8.91 PERCENT COMPARE TO SJG'S CURRENTLY-AUTHORIZED RATE OF RETURN?

A. SJG's currently-authorized rate of return was set by the Board in Docket No. GR03080683, as shown below in Table 2:

Table 2 SJG's Currently-Authorized Rate of Return			
Capital Type	% Total	Cost Rate	Weighted Cost
Long-Term Debt	46.26	6.76%	3.13%
Short-Term Debt	7.46	3.0	0.22
Preferred Stock	0.28	8.03	0.02
Common Equity	46.00	10.0	4.60
Total	**100%**	--	**7.97%**

Source: RCR-ROR-4

The comparisons of Tables 1 and 2 demonstrates that the Company in this case is seeking a substantial increase in its authorized return, which is a major reason for the magnitude of its rate request. The requested ROE goes from the currently-authorized 10.0 to 11.5 percent (a 15 percent increase) and the common equity ratio increases from 46.0 percent to 54 percent (a 17 percent increase). As my testimony explains, SJG is seeking these large return increases even though its cost of capital remains quite low, and its business risk profile continues to be favorable.

Q. WHAT IS YOUR RATE OF RETURN RECOMMENDATION AT THIS TIME?

A. As summarized on page 1 of Schedule MIK-1, I am recommending an authorized overall rate of return of 7.73 percent, subject to updating. This includes a return on common equity of 10.0 percent, and a capital structure of 43 percent long-term debt, 6 percent short-term debt and 51 percent common equity. SJG no longer has any preferred stock. It should be noted that I am recommending a return on equity consistent with what the Board has authorized for SJG in its last rate case and a common equity ratio that is somewhat higher than currently authorized.

Q. DO YOU ACCEPT SJG'S GENERAL APPROACH TO CAPITAL STRUCTURE?

A. Yes. Under the circumstances, it is reasonable to use the SJG projected actual capitalization for the rate setting capital structure, consistent with past practice for the Company. However, SJG's omission of short-term debt from ratemaking capital structure is not consistent with past practice and causes a significant overstatement of both the common equity ratio and the fair rate of return. My testimony corrects that problem by including short-term debt consistent with that approved in SJG's last case.

Q. WHAT IS THE BASIS OF YOUR 10.0 PERCENT RECOMMENDATION FOR THE RETURN ON EQUITY?

A. I am relying primarily upon the standard discounted cash flow ("DCF") model applied to a group of gas distribution utility companies. I also apply the DCF model to Mr. Moul's group of gas utility companies as a check. My DCF studies use market data from the six months ending March 2010, obtaining a range of 9.4 to 10.3 percent. My recommendation of 10.0 percent approximates the midpoint and reasonably reflects this range of evidence. I have attempted to confirm my DCF results and recommendation using the Capital Asset Pricing Model (CAPM) as a check. While the CAPM tends to produce a very wide range of cost of equity results, in my opinion, a reasonable application of this methodology using current market data provides estimates in approximately the 8 to 10 percent range when a reasonable range of data inputs is used. The CAPM midpoint is about 9 percent. As my testimony explains, the CAPM currently produces cost of equity results that are somewhat lower than historically, and I do assign not as much weight to that method as the DCF studies in establishing my recommendation for the Company's authorized ROE.

Mr. Moul employs both the DCF and CAPM approaches, along with a historical Risk Premium analysis. He also presents "comparable earnings" evidence although he assigns little or no weight to it in developing his recommendation. In my opinion, his studies significantly overstate the cost of equity for SJG.

Q. DO YOU INCLUDE AN ADJUSTMENT FOR FLOTATION EXPENSE?

A. No, I do not since SJI parent has not conducted a common equity issuance in recent years and therefore has not incurred flotation expense. I note that Mr. Moul adds

0.22 percent to his cost of equity results for flotation expense even though there are no such expenses to recover.

Q. DO YOU CONSIDER SJG TO BE A LOW-RISK UTILITY COMPANY?

A. Yes, very much so, and this is also the clear consensus of credit rating agencies. SJG provides monopoly gas distribution utility service in its New Jersey service territory, subject to the regulatory oversight of the Board. There is no indication of any material increase in the Company's business or financial risk in recent years that would warrant the extraordinarily large increase in the authorized rate of return on equity requested in this case. In Section III of my testimony, I discuss the risk attributes for the Company cited in recent credit rating reports.

Q. HOW DOES YOUR RETURN RECOMMENDATION AT THIS TIME COMPARE WITH RETURNS GRANTED TO THE COMPANY IN ITS LAST ELECTRIC CASE?

A. My recommendation for the equity return and equity ratio is the same as or an increase over the Company's currently-authorized gas distribution return. I believe that my approach of recommending a continuation of the currently-authorized ROE and an increase at this time in the common equity ratio is fair to both customers and the Company, consistent with market evidence and investor requirements. My recommendations properly emphasize the need at this time for ratemaking stability and continuity during a period of economic distress for the New Jersey economy. By contrast, the Company's request for a very large increase in both ROE and the common equity ratio is both abrupt and unsupportable.

Q. HOW DOES MR. MOUL OBTAIN HIS COST OF EQUITY ESTIMATE OF 11.5 PERCENT?

A. Mr. Moul uses three cost of equity methods -- the DCF, CAPM and Risk Premium. These methods are applied to his group of natural gas utility companies. The average of his studies, inclusive of his various "adders," is about 11.5 percent. While my own gas proxy group differs somewhat from his, I do not regard proxy company selection as a major source of disagreement in this case. Rather, my disagreement with Mr. Moul is with his unwarranted adjustments or "adders" to the standard cost of equity methodologies that cause him to overstate the cost of capital. Specifically, he includes improper "adders" for (a) flotation expense; (b) market-versus-book capital structures; and (c) SJG's relatively small size. My testimony discusses in some detail the various disagreements that I have with Mr. Moul's "adders" in the application of these methods.

B. <u>Capital Cost Trends</u>

Q. HAVE YOU REVIEWED THE TRENDS IN MARKET CAPITAL COSTS OVER THE PAST DECADE?

A. Yes. My Schedule MIK-2 shows certain capital cost indicators on an annual average basis since 1992 and on a monthly basis during January 2002 – April 2010. The indicators include inflation (as measured by the annual year-over-year change in the Consumer Price Index or CPI), yields on short-term Treasury Bills, yields on ten-year Treasury notes and yields on single-A-rated utility long-term bond (published by Moodys).

This schedule shows that despite year-to-year fluctuations there has been a general downward trend in capital costs over most of this time period, at least for long-term securities. Short-term interest rates tend to be governed by Federal Reserve Board ("Fed") monetary policy, and up until about two years ago, the Fed had been tightening (i.e., raising short-term rates) in response to a strengthening economy. In response to a slowing U. S. economy in 2008 and subsequent sharp recession, the emerging severe distress in the housing market and a variety of dislocations in financial markets, the Fed has reversed this trend and pursued an aggressive policy of monetary easing (sometimes referred to as "quantitative easing"). In addition to lowering short-term interest rates to close to zero, it has taken a number of innovative actions to make liquidity and credit available to financial institutions to help ensure that financial markets can function properly.[1]

As measured by utility bond yields, it appears that capital costs "bottomed out" in mid-2005, with single-A utility bond yields reaching a low point in the mid 5 percent range. Long-term interest rates remained relatively low through most of 2006 (i.e., long-term utility bond yields at approximately 6 percent), and this continued (with some fluctuations) until late 2008. During the financial/economic crisis conditions of the fourth quarter 2008, long-term corporate bond yields moved up sharply to the 8 to 9 percent range. Since then, the financial crisis has eased considerably, and yields on investment grade corporate bonds (as well as credit spreads) have moderated considerably. As shown on page 5 of Schedule MIK-2, during the second half of 2009 through early 2010, single-A utility bond yields declined, returning to the roughly 5.5 to 6.0 percent range and have been relatively stable in recent months. This is roughly consistent with (or even lower than) yields prevailing on utility bonds during the last several years, including utility bond yields at the time of the Company's last rate case in 2003/early 2004.

[1] In a January 13, 2009 presentation at the London School of Economics, Fed Chairman Bernanke described the Fed's aggressive efforts to lower interest rates and its present policy of "credit easing" using a vast array of monetary tools. These policy initiatives include a dramatic expansion of the Fed's balance sheet to provide credit or credit support to various sectors of the U. S. economy. This speech is available on the Fed's web site, www.federalreserve.gov.

Yields on Treasury notes have trended downward, with the ten-year note reaching as low as 2.5 percent at the beginning of 2009. The pronounced downward trend in Treasury yields relative to long-term utility bond yields undoubtedly reflected a "flight to quality" behavior by investors as a result of the severe economic and financial market distress. Since then, long-term Treasury yields have moved up somewhat from these extreme historic low levels, as the corporate debt and equity markets have improved. This reflects some sign of a nascent economic recovery (or at least economic stabilization) and an easing of credit spreads, at least for credit-worthy corporations such as SJI and SJG.

Q. ACCORDING TO SCHEDULE MIK-2, THERE WAS UPWARD MOVEMENT IN INFLATION DURING 2008. WHAT ACCOUNTED FOR THAT TREND?

A. The 2008 upward movement in inflation was in response to price spikes for energy and, to some degree, it reflected increased food prices. However, later in 2008, this trend reversed with commodity prices collapsing and overall inflation essentially disappearing. The CPI in 2009 exhibited essentially zero inflation or even negative inflation compared to 2008. Long-term forecasts for inflation are also modest, i.e., the "consensus" forecast for the GDP deflator is 2.1 to 2.2 percent per year for the next ten years (*Blue Chip Economic Indicators*, March 2010), and consensus inflation forecasts for the next year or two indicate inflation is expected to be about two percent annually. There are a number of important forces at work that will tend to hold down long-term inflation and inflationary expectations, principally a weak economy. Low inflation is a crucially important force at work that tends to lower the utility cost of capital.

Q. DOES YOUR VIEW OF LOW INFLATION, WEAK ECONOMIC GROWTH AND IMPROVED FINANCIAL MARKETS COMPORT WITH THE VIEWS OF U.S. MONETARY AUTHORITIES?

A. Yes. A recent assessment was made public by the Fed's Open Market Committee on March 16, 2010 following its monetary policy meeting that day. (See www.federalreserve.gov/newsevents/press/monetary/20100316a.htm.) The Fed depicts a gradual return to economic growth, low inflation and stubbornly high unemployment.

> 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.
>
> With substantial resource slack continuing to restrain cost pressures and longer-term inflation expectations stable, inflation is likely to be subdued for some time.
>
> The Committee will maintain the target range for the Federal funds rate at 0 to ¼ percent and continues to anticipate that economic conditions, including low rates of resource utilization, subdued inflation trends, and stable inflation expectations, are likely to warrant exceptionally low levels of the federal funds rate for an extended period.

This statement indicates that the Fed remains committed to maintaining an "accommodative" monetary policy, low inflation and low interest rates, at least until the U.S. economy shows significantly greater strength.

Q. YOUR SCHEDULE MIK-2 PROVIDES DATA ON LONG-TERM INTEREST RATES. IS THIS INDICATIVE OF COMMON EQUITY COST RATES?

A. At least in a general sense, I believe that it is. The forces over time that lead to lower yields on long-term debt tend to favorably affect the cost of equity, although I would acknowledge that debt and equity cost rates do not necessarily move together in lock step. (The severe declines in long-term Treasury yields during the financial crisis is an example of that.) The favorable cost trends discussed above likely affect SJG's equity cost rate associated with providing gas distribution utility service. At the present time, however, the market trends since mid or early 2009 are generally favorable with trends of improving stock market, declining corporate bond yields and narrowing credit spreads.

Q. DO YOU HAVE ANY FURTHER COMMENTS ON THE CURRENT ECONOMIC ENVIRONMENT?

A. Yes. The past year and a half has been a very difficult economic environment that has been characterized by a pronounced economic downturn, rising unemployment and severe financial market distress. In addition, energy and commodity prices escalated sharply in early 2008, but since then subsequently reversed course. These difficult conditions have implications for the cost of capital but in conflicting directions. The weakening of the U. S. (and global) economy and extremely low inflation tend to push down the cost of capital, as evidenced by the sharp interest rate reductions in yields on Treasury securities and even the recent moderation in utility bond yields. However, volatility and financial distress can increase the corporate cost of capital by increasing investment risk, at least until confidence in markets and financial stability is reestablished. In this environment, cost of capital estimation must be approached with caution, a point that I believe Mr. Moul acknowledges.

While there are conflicting signals in financial markets, there have been substantial improvements within the past year. Over the course of approximately the past year and a half, financial market volatility has greatly attenuated, and corporate credit spreads over long-term Treasury yields have sharply reduced for credit-worthy utilities (such as SJG). The stock market to a large degree has recovered from its severe March 2009 low levels, and corporate debt cost rates since late 2008/early 2009 have declined. The Fed has committed itself to maintaining for the near term near zero levels of short-term interest rates and an aggressive credit easing policy until an economic recovery takes hold or inflationary pressures become evident. Inflation, as the Fed's statement notes, is simply not on the horizon at the present time. Strong, credit-worthy utilities operate in a low inflation and capital cost environment, and this environment is expected to continue for the foreseeable future. In this low-cost environment for utilities, there is no basis for the sharp increase in SJG's authorized return on equity, as proposed in this case and recommended by Mr. Moul.

C. <u>Remainder of Testimony</u>

Q. PLEASE DESCRIBE THE ORGANIZATION OF THE REMAINDER OF YOUR DIRECT TESTIMONY.

A. Section III presents my proposals concerning the proposed capital structure and cost of debt. This section also briefly discusses the credit rating and business risk assessments. Section IV presents my cost of equity analyses and recommendation. This includes both the DCF and CAPM studies, with the majority of emphasis on the former. Section V is a critique of the cost of equity evidence submitted by Mr. Moul on behalf of the Company and his 11.5 percent cost of equity recommendation.

III. CAPITAL STRUCTURE AND BUSINESS RISK

A. Capital Structure Modifications

Q. HOW HAS MR. MOUL DEVELOPED HIS RECOMMENDED CAPITAL STRUCTURE?

A. For the "9+3" update, Mr. Moul begins with the Company's actual capital structure at March 10, 2010 (excluding short-term debt), which is 60.7 percent common equity and 39.3 percent long-term debt. Next, he adds in projected changes between March 31 and June 30, 2010 to obtain the pro-forma, projected June 30, 2010 capital structure. This includes a small increase in common equity (i.e., income minus dividend payments) and two new issues of long-term debt planned by SJG. One debt issue is expected prior to June 30, 2010 ($45 million at a cost rate of 4.96 percent), and the second is expected to occur shortly after June (i.e., by September 2010). This is also a $45 million issuance at a 5.5 percent cost rate. Mr. Moul also incorporates these new debt issuances in the development of the embedded cost of long-term debt. (Source: "9+3" update, Exhibit PRM-1, Schedules 5 and 6)

Q. HOW DOES MR. MOUL'S CAPITAL STRUCTURE RECOMMENDATION COMPARE TO WHAT THE BOARD HAS PREVIOUSLY APPROVED?

A. It is dramatically more expensive. In SJG's last rate case, the Board approved a common equity ratio of 46 percent compared to the 54 percent sought in this case. The pre-tax rate of return on equity recommended by Mr. Moul is 19.5 percent (11.5%/(1-0.41)) compared to his 5.83 percent cost of debt -- a pre-tax equity premium of about 14 percent. Given the requested rate base of $868 million, the increase in the equity ratio adds about $9.7 million ($868 million x 14% x 8%) to the rate request using Mr. Moul's ROE. Hence, capital structure is a major "driver" of the Company's claimed rate increase.

Q. DID THE BOARD INCLUDE SHORT-TERM DEBT IN SJG'S CURRENTLY-AUTHORIZED CAPITAL STRUCTURE?

A. Yes. The capital structure from the last case includes 7.5 percent short-term debt at a cost rate of 3.0 percent. Thus, the exclusion of short-term debt by Mr. Moul is an important reason for the apparent increase in the common equity ratio.

Q. WHY DID MR. MOUL EXCLUDE SHORT-TERM DEBT?

A. Mr. Moul acknowledges that SJG uses a substantial amount of short-term debt during the test year, an average balance of $91.3 million for the most recent 12 months ending March 2010. Including projected balances for April-June 2010, the 12-month test-year average declines to $86 million.

Mr. Moul then proceeds to "zero out" short-term debt using three adjustments. Specifically, he subtracts out the test year average balance of construction work-in progress (CWIP); the test year average balance of the Remediation Adjustment Clause (RAC); and the $45 million planned long-term debt issue. Please note that the test year CWIP and RAC balances are $32 million and $45.9 million, respectively. The combination of these three subtractions results in a <u>negative</u> short-term debt balance of $36.9 million, which Mr. Moul simple sets to zero.

Q. IS IT TYPICAL BEHAVIOR FOR GAS UTILITY COMPANIES TO USE SHORT-TERM DEBT TO FINANCE THEIR OPERATIONS?

A. Yes, it is. The gas utility industry is highly seasonal, with large seasonal swings in cash flow. This includes the need for operating funds to pay for gas in storage. As a result, it is very common for a significant portion of capitalization (normally, 5 to 10 percent or more) to be in the form of short-term debt. Short-term debt is both flexible and highly economic (in most cases at least). Historically, this also has been true for SJG. Mr. Moul's Schedule 2 (page 1 of 2) shows that for SJG short-term debt has ranged from $53 to $114 million during 2004-2008, averaging 6.5 percent of total capital. Mr. Moul's gas utility proxy group also has historically made extensive use of short-term debt. For these seven companies, during 2004 to 2008, short-term debt averaged about 7 percent of total capital and was nearly 9 percent at year-end 2008. (See Mr. Moul's Schedule 3, page 1 of 3.) Thus, the significant use of short-term debt by gas utilities and the rate recognition of that debt are entirely normal.

Q. IS THE SAME TRUE FOR YOUR PROXY GAS COMPANIES?

A. Yes, it is. I compiled the capital structures inclusive of short-term debt for my nine proxy gas companies using the 2009 year-end balance sheet information. While Value Line provides capital structure ratios for each company (see Schedule MIK-3), they are of limited use for gas companies because Value Line's calculated ratios exclude both short-term debt and current maturities of long-term debt.

Common Equity and Short-Term Debt Ratios for Proxy Gas Companies, Year-End 2009

		Short-Term Debt	Common Equity
(1)	AGL Resources	14.8%	40.4%
(2)	Atmos	4.1	49.0
(3)	LaClede	16.0	49.9
(4)	NICOR	27.0	49.4
(5)	Northwest Natural	11.0	46.5
(6)	Piedmont	17.9	47.3
(7)	South Jersey Industries	23.2	48.7
(8)	Southwest Gas	0.1	46.5
(9)	WGL	12.8	57.0
	Average	**14.1%**	**48.3%**

Q. DO CREDIT RATING AGENCIES RECOGNIZE A COMPANY'S USE OF SHORT-TERM DEBT?

A. Absolutely. Credit rating agencies use certain "metrics" in to help determine the ratings for a company and its bonds. These metrics include--directly or indirectly--all debt and debt interest, including short-term debt. Hence, a company's use of short-term debt will affect its credit rating and therefore its cost of capital. This is a reason why it is improper to exclude short-term debt from consideration in the ratemaking process.

Q. DO YOU DISPUTE MR. MOUL'S SHORT-TERM DEBT REDUCTION ADJUSTMENTS?

A. Yes, I do, with the possible exception of CWIP which I will explain. There is simply no basis whatsoever for removing the RAC balance from short-term debt. Cost recovery under the RAC for remediation costs was approved by the Board in a completely separate docket and has nothing to do with this case. The Company supplied a copy of that order in response to RCR-ROR-17. In that order, the Board approved a cost recovery clause that awarded the Company a return on the RAC balance (to be recovered through the clause) equal to the seven-year Treasury security yield plus 60 basis points. Hence, the return on the RAC balance is a settled issue, and there is no basis for revisiting that return in this case. Mr. Moul proposes instead to allocate SJG's short-term debt to the RAC balance, something that the Board never authorized. Obviously, in the RAC proceeding, the Company could have proposed such an allocation and/or the Board could have directed what Mr. Moul now proposes. The Board did not do so, nor am I aware of the Board doing so for a RAC (or similar mechanism) in any other case.

In my opinion, what Mr. Moul has done -- in effect -- is to change the ratemaking effect of the RAC that was approved by the Board. SJG will continue to charge ratepayers the 7-year Treasury yield plus 60 basis points return on the RAC balance. However, by allocating short-term debt to RAC, Mr. Moul increases SJG's rate of return in this rate case. In effect, he has increased the cost of RAC to ratepayers, circumventing the Board's decision. This is totally improper.

Q. MR. MOUL'S OTHER SUBTRACTION IS FOR THE NEW LONG-TERM DEBT. IS THIS PROPER?

A. In general, it is not proper. It is certainly possible that at the time SJG issues new debt, some of the proceeds may be used to pay down short-term debt balances. (There is no clear evidence on this one way or the other.) And, if the actual test year amount of short-term debt was extraordinarily high, it is possible that a deduction of a long-term debt new issue (or some portion) would be a reasonable way to obtain a short-term debt level for ratemaking purposes that is reflective of normal operations. This is not what Mr. Moul has done. Rather, he has used a long-term issue to "zero out" short-term debt, giving the misleading impression that SJG will not utilize short-term debt (or only a small amount of short-term debt) in the future.

The plain fact is that SJG, like other gas companies, has made substantial use of short-term debt to finance its operations. In the last case, the Board included about 7.5 percent of capital as short-term debt, and Mr. Moul has shown that since 2004 the Company has continued to use roughly that same percentage (on average). When the Company's long-term debt issue is completed, short-term balances will likely decline on a temporary basis. But subsequently, as capital and cash requirements grow, SJG will continue to use short-term debt sources for financing. To do otherwise may be imprudent.

The key fact is that neither Mr. Moul nor any other SJI witness has shown that the actual test-year level of short-term debt is either extraordinarily large or differs substantially from the way the Company will finance on an ongoing basis in the future.

Q. DO YOU FIND MR. MOUL'S PROPOSAL TO SUBTRACT CWIP FROM SHORT-TERM DEBT FOR CAPITAL STRUCTURE PURPOSES TO BE ACCEPTABLE?

A. It could be acceptable providing SJG commits to using on an ongoing basis the short-term debt rate as the CWIP carrying charge rate (i.e., Allowance for Funds Used During Construction, AFUDC). In that case, the rate of return on rate base from this rate case will be somewhat higher, but ratepayers will receive the full benefit of (the inexpensive) short-term debt through lower AFUDC accruals. Those savings will show up in future rate cases as the new capital expenditures are added to rate base. The Company's response to RCR-ROR-3 indicates that its current AFUDC rate is its Board-authorized overall rate of return, 7.97 percent, not the short-term debt rate.

Q. WHAT IS YOUR CAPITAL STRUCTURE RECOMMENDATION?

A. As shown on page 1 of Schedule MIK-1, I am provisionally accepting Mr. Moul's capital structure estimates at June 30, 2010, except that I have included $54 million of short-term debt at a cost rate of 2.0 percent. This results in a capital structure of 51 percent common equity, 43 percent long-term debt and 6 percent short-term debt.

The development of the short-term balance is shown on Schedule MIK-1, page 2 of 2. Starting with the (projected) test year balance of $86 million, I subtract out the test-year level of CWIP of $32 million, as discussed about. SJG should be ordered to use the short-term debt rate as its AFUDC rate at the conclusion of this case to be consistent with this capital structure and quantification of short-term debt.

Page 2 of Schedule MIK-1 also shows a short-term cost rate of well below 1.0 percent during the test year. While this reflects current market conditions and is likely to persist for some period it is likely to rise somewhat in the near future, as indicated by most economic forecasts. Hence, on a provisional basis, I incorporate a short-term cost rate of 2.0 percent. This outlook should be revisited at a later date prior to hearings.

B. <u>Discussion of SJG's Business Risk</u>

Q. THERE HAS BEEN SUBSTANTIAL TURMOIL IN FINANCIAL MARKETS IN THE LAST TWO YEARS. WHAT DOES THIS IMPLY FOR SJG'S COST OF EQUITY?

A. Section II.C of my testimony discusses the improvement in financial markets and stabilization that has occurred since the 2008 financial crisis. Of course, difficulties with financial institutions and credit availability to some degree remain, but credit spreads for utility bonds relative to Treasury securities have narrowed substantially during the past year, even though the U.S. economy remains quite weak. Moreover, ongoing economic weakness is a key factor helping to keep inflation in check and capital costs low.

While it is true that risks have been elevated for many types of equity investments (as one would expect in a severe economic downturn), there is a relative "safe haven" quality to investing in utility stocks. Value Line, a publication normally not particularly enthusiastic about investments in utilities, has recently expressed this point of view for gas and electric utilities. In its June 12, 2009 report on the natural gas utility group, Value Line notes that gas utilities are well regarded by investors due to their "defensive characteristics."

> Natural Gas utilities tend to offer predictable cash flows, healthy dividend yields, and generally have solid balance sheets. Accordingly, these stocks have been increasingly sought after by investors over the past year. (Value Line, page 446, June 12, 2009)

Value Line's industry report further finds that these companies have "provided fairly safe haven amid the recessionary environment" and it notes gas utility "steady cash flow." (*Id.*) Value Line also cautions that gas company non-regulated operations, while relatively modest in size, "add a greater degree of risk to the businesses that utilize the strategy." (*Id.*)

Ironically, as equity markets have recovered, this means that "safe haven" type of investments (such as utilities) become less interesting to investors due to their stable but unexciting return opportunities. With the stock market recovered and investor fears somewhat subsided Value Line observes:

> Natural Gas Utilities generally offer fairly predictable cash flows, solid balance sheets, and good yields. Therefore, when times are tough, investor interest in these defensive equities picks up. However, when the stock market rallies, investors tend to flock to issues that have the potential for greater returns. (March 12, 2010)

Value Line is merely observing that during normal times gas utilities are viewed by investors as safe but providing relatively modest expected returns, i.e., a low cost of equity.

Q. YOU HAVE CITED VALUE LINE'S OPINION CONCERNING THE "SAFE HAVEN" INVESTMENT ATTRIBUTES OF GAS UTILITY STOCKS. IS THERE OBJECTIVE DATA AVAILABLE THAT SUPPORTS THIS VIEW?

A. Yes. During the economic and financial turmoil of late 2008 and early 2009, there was pronounced stock market volatility and plunging prices. By comparison utility stocks have been far more stable, particularly for utility companies not burdened by the exposure of substantial non-utility operations. One measure of this improvement is the trend in utility "betas" (a measure of a company's stock price volatility relative to the overall stock market) during the past year. The following table below compares betas published by Value Line for my nine proxy gas utilities in June 2008 versus betas in March 2010. This table demonstrates that in June 2008 the betas for the proxy utilities averaged 0.87, whereas by March 2010 they have declined sharply to about 0.67. This indicates a major reduction in the *relative* risk within the past year for investing in utility stocks as compared to common stocks generally.

Gas Utility Betas Comparison
(June 2008 vs. March 2010)

	2008	2010
AGL Resources	0.85	0.75
Atmos	0.85	0.65
LaClede	0.90	0.60
NICOR	0.95	0.70
Northwest Natural	0.80	0.65
Piedmont Natural	0.85	0.65
South Jersey	0.85	0.60
Southwest Gas	0.90	0.75
WGL	0.90	0.65
Average	**0.87**	**0.67**

(Source: *Value Line Investment Survey*, June 11, 2008, March 12 2010)

Q. DOES SJG SHARE IN THIS RISK REDUCTION?

A. Yes, very much so. SJG, of course, is not a publically-traded company, but as a distribution gas utility it would have the same risk reduction attributes that investors would find attractive for utilities generally.

Q. WHAT IS THE ASSESSMENT OF CREDIT RATING AGENCIES?

A. The Company has supplied its recent credit rating reports published by Moody's and Standard & Poor's (S&P) in response to RCR-ROR-5. As a general matter, these credit rating reports indicate that SJG, as a regulated delivery service utility, has very low business risk.

S&P does not separately evaluate SJG, but considers its credit quality in the overall context of the consolidated SJI. In that regard, S&P states the SJG's rating "reflects the consolidated credit profile of its parent, Folsom, N.J.-based South Jersey Industries Inc. (SJI)." S&P's report (December 17, 2009) goes on to evaluate SJG's own business compared to that of SJI:

> SJG's excellent business risk profile is characterized by regulatory treatment that is favorable for credit quality, an attractive service territory with above-average growth rates, low operating risk, and efficient operations. These strengths weigh more heavily on the rating than SJI's aggressive financial profile and SJI's high-risk, unregulated operations.
>
> *   *   *   *
>
> SJI's strengths are partly offset by its participation in various unregulated businesses. Standard & Poor's generally views unregulated businesses as riskier-than regulated operations because of greater cash flow variability.

It is clear that SJI's unregulated business activities are a negative factor in SJG's rating from S&P. Nonetheless, SJG has a BBB+ corporate rating and a solid A secured rating with an outlook of "Stable." One of S&P's main ratings concern is SJI's expansion of unregulated businesses.

Moody's assessment is similar to S&P except that it views SJG on more of a stand-alone basis. Moody's assigns SJG a corporate rating of Baa(1), with a secured debt rating of A(2) and an outlook of "Positive." (Report of February 4, 2010)

Moody's echoes S&P's assessment that SJG operates in a supportive regulatory environment in New Jersey with an improving liquity profile. Moody's states that its rating:

> reflects SJG's low LDC business risk, the ring-fencing of its activities from SJI's unregulated business, and relatively credit supportive regulatory framework under which it operates that allows for the ability to recover costs and investments as a reasonably timely manner.

Q. WHAT DO YOU CONCLUDE?

A. The credit rating agency reports indicate that SJG operates as a very low risk utility with a strong service area and supportive regulation. SJG's risk is somewhat less than that of the consolidated SJI due to the parent's non-regulated operations. Since the onset of the financial/economic crisis in 2008, the investment risk for utilities such as SJG likely has declined relative to that of the overall stock market.

The information that I have reviewed does not support the presence of increased business risk for SJG since its last rate case in 2004 that would merit a higher rate of return award by the Board. If anything, it appears that SJG's overall investment risk may have improved since 2004.

IV. COST OF COMMON EQUITY CALCULATIONS

A. Using the DCF Model

Q. WHAT STANDARD ARE YOU USING TO DEVELOP YOUR RETURN ON EQUITY RECOMMENDATION?

A. As a general matter, the ratemaking process is designed to provide the utility an opportunity to recover its (prudently-incurred) costs of providing utility service to its customers, including the reasonable costs of financing its (used and useful) investment. Consistent with this "cost-based" approach, the fair and appropriate return on equity award for a utility is its cost of equity. The utility's cost of equity is the return required by investors (i.e., the "market return") to acquire or hold that company's common stock. A return award greater than the market return would be excessive and would overcharge customers for utility service. Similarly, an insufficient return could unduly weaken the utility and impair incentives to invest.

Although the *concept* of the cost of equity may be precisely stated, its quantification poses challenges to regulators. The market cost of equity, unlike most other utility costs, cannot be directly observed (i.e., investors do not directly, unambiguously state their return requirements), and it therefore must be estimated using analytic techniques. The DCF model is one such prominent technique familiar to analysts, the Board and other utility regulators.

Q. IS THE COST OF EQUITY A FAIR RETURN AWARD FOR THE UTILITY AND ITS CUSTOMERS?

A. Generally speaking, I believe it is. A return award commensurate with the cost of equity generally provides fair and reasonable compensation to utility investors and normally should allow efficient utility management to successfully finance operations on reasonable terms. Certainly, it has been my experience that setting the return equal to a reasonable estimate of the cost of capital has permitted utilities to operate successfully and attract capital. Moreover, setting the return on equity equal to a reasonable estimate of the cost of equity also is generally fair to ratepayers.

I recognize that there can be exceptions to this general rule. For example, in some instances, utilities have sought rate of return adders as a reward for asserted good management performance. In this case, it does not appear that the Company is making an explicit request for a performance adder, and therefore the issue is one of *measuring* the cost of equity, not whether a properly measured cost of equity is a fair return. While Mr. Moul does not propose a performance adder, his cost of equity recommendation either directly or indirectly incorporates adders that are not part of the cost of equity.

Q. WHAT DETERMINES A COMPANY'S COST OF EQUITY?

A. It should be understood that the cost of equity is essentially a market price, and as such, it is ultimately determined by the forces of supply and demand operating in financial markets. In that regard, there are two key factors that determine this price. First, a company's cost of equity is determined by the fundamental conditions in capital markets (e.g., outlook for inflation, monetary policy, changes in investor behavior, investor asset preferences, the general business environment, etc.). The second factor (or set of factors) is the business and financial risks of the company in question. For example, the fact that a utility company effectively operates as a regulated monopoly, dedicated to providing an essential service (in this case gas utility distribution service), typically would imply very low business risk and therefore a relatively low cost of equity. SJG's relatively low business risks and the favorable assessment of the Company by the various credit rating agencies discussed in Section III.B are indicative of its low cost of equity.

Q. WHAT METHODS ARE YOU USING IN THIS CASE?

A. I employ both the DCF and CAPM models, applied to two proxy groups of gas utility companies. However, for reasons discussed in my testimony, I emphasize the DCF model results in formulating my recommendation. It has been my experience that most utility regulatory commissions (federal and state) heavily emphasize the use of the DCF model to determine the cost of equity and setting the fair return. As a check (and partly to respond to Mr. Moul), I also perform a CAPM study which is based on the same proxy group companies used in my DCF study.

Q. PLEASE DESCRIBE THE DCF MODEL.

A. As mentioned, this model has been widely relied upon by the regulatory community, including by the New Jersey BPU in past cases. Its widespread acceptance among regulators is due to the fact that the model is market-based and is derived from standard economic/financial theory. The model is also transparent and understandable to regulators. I do not believe that an obscure or highly arcane model would receive the same degree of regulatory acceptance.

The theory begins by recognizing that any publicly-traded common stock (utility or otherwise) will sell at a price reflecting the discounted stream of cash flows *expected by investors*. The objective is to estimate that discount rate, which is the cost of equity.

Using certain simplifying assumptions (that I believe are generally reasonable for utilities), the DCF model for dividend paying stocks can be distilled down as follows:

$K_e = (Do/Po)\ (1 + 0.5g) + g$, where:

K_e = cost of equity;

Do = the current annualized dividend;

Po = stock price at the current time; and

g = the long-term annualized dividend growth rate.

This is referred to as the constant growth DCF model, because for mathematical simplicity it is assumed that the growth rate is constant for an indefinitely long time period. While this assumption may be unrealistic (or not fully realistic) in many cases, for traditional utilities or groups of utility companies (which tend to be more stable than most unregulated companies) the assumption generally is reasonable, particularly when applied to a group of companies.

Q. HOW HAVE YOU APPLIED THIS MODEL?

A. Strictly speaking, the model can be applied only to publicly-traded companies, i.e., companies whose market prices (and therefore market valuations) are transparently revealed. Consequently, the model cannot be applied to SJG, which is a wholly-owned subsidiary of SJI, and therefore a market proxy is needed. SJI, however, is a publically-traded company, and I have included SJI as one of my nine proxy companies, and I note that Mr. Moul does so as well.

In any case, I believe that an appropriately selected proxy group (preferably one reasonable in size) is likely to be more reliable than a single company study. This is because there is “noise” or fluctuations in stock price (or other) data that cannot always be readily accounted for in a simple DCF study. The use of an appropriate and robust proxy group helps to allow such “data anomalies” to cancel out in the averaging process.

For the same reason, I prefer to use market data that are relatively current but averaged over a period of at least at least several months (i.e., six months) rather than purely relying upon “spot” market data. It is important to recall that this is not an academic exercise but involves the setting of "permanent" utility rates that are likely to be in effect for several years. The practice of averaging market data over a period of several months can add stability to the results.

In that regard, Mr. Moul also uses stock prices averaged over a six-month period, i.e., the six months ending November 2009. Thus, other than differences in timing pertaining to when our respective testimonies were filed, Mr. Moul and I are in basic agreement on this issue.

Q. ARE YOU EMPLOYING THE DCF MODEL USING UTILITY PROXY GROUPS?

A. As discussed further, I am employing two proxy groups of companies that are predominantly gas distribution utility delivery services and therefore reasonably comparable to SJG. The first group consists of nine companies that are classified by the Value Line Investment Survey as gas distribution utilities. There are 12 such companies in the Value Line data base, and I have selected nine of the 12. My second group consists of the seven gas companies that comprise Mr. Moul's proxy group of gas companies. Six of his seven companies are also included in my proxy group.

Q. WHAT VALUE LINE GAS COMPANIES HAVE YOU ELIMINATED?

A. I have eliminated New Jersey Resources, UGI and NiSource. The first two have been eliminated due to their relatively large non-regulated operations, and NiSource is a vertically-integrated electric company with significant gas operations. With these three eliminations, I have a proxy group of nine companies that operate predominantly as monopoly utilities. Mr. Moul also has eliminated UGI and NiSource, but he has chosen to retain New Jersey Resources.

B. <u>DCF Study Using the Proxy Group of Gas Distribution Utility Companies</u>

Q. PLEASE DESCRIBE YOUR GAS PROXY GROUP.

A. The nine gas utility companies in my group of proxy companies are listed on Schedule MIK-3, page 1 of 2, along with several risk indicators. The measures include Value Line's Safety and Financial Strength ratings, beta and the 2009 common equity ratio. In my opinion, these companies (on average) are reasonably comparable in risk to SJG.

It should be noted that although the proxy companies are primarily regulated gas distribution utilities, some also have some non-regulated operations that may be perceived as somewhat riskier than utility operations (e.g., energy marketing). (As noted in Section III.B, Value Line and credit rating agencies generally view the non-regulated operations as being riskier. I make no specific adjustment to my DCF cost of capital results or my final recommendation for the effects of those potentially riskier non-regulated operations.

Q. HAVE EITHER YOU OR MR. MOUL PROPOSED A SPECIFIC RISK ADJUSTMENT TO THE COST OF EQUITY BETWEEN THE PROXY COMPANIES AND SJG?

A. No, Mr. Moul does not propose a specific adjustment pertaining to business risk. However, he does include a large adjustment that purports to account for "debt leverage" as compared to the proxy group.

Q. HOW HAVE YOU APPLIED THE DCF MODEL TO THIS GROUP?

A. I have elected to use a six-month time period to measure the dividend yield component (Do/Po) of the DCF formula. Using the Standard & Poor's *Stock Guide*, I compiled the month-ending dividend yields for the six months ending March 2010 the most recent market data available to me as of this writing. This covers the quarter of 2009 and the first quarter of 2010, a period of some gradual improvement and relative stability in financial markets, as noted by the Fed Chairman Bernanke in recent statements.

I show these dividend yield data on page 2 of Schedule MIK-4 for each month and each proxy company, October 2009 through March 2010. Over this six-month period the group average dividend yields were relatively stable, but gradually diminishing, ranging from a high of 4.46 percent in November 2009 to a low of 4.10 percent in March 2010, averaging 4.28 percent for the full six months.

For DCF purposes and at this time, I am using a proxy group dividend yield of 4.28 percent.

Q. IS 4.28 PERCENT YOUR FINAL DIVIDEND YIELD?

A. Not quite. Strictly speaking, the dividend yield used in the model should be the value the investor expects over the next 12 months. Using the standard "half year" growth rate adjustment technique as a proxy, the DCF adjusted yield becomes 4.4 percent. This is based on assuming that half of a year of dividend growth is 2.75 percent (i.e., a full year growth is 5.5 percent). Mr. Moul employs a dividend yield adjustment that appears to be similar to my "0.5g" adjustment.

Q. HOW HAVE YOU DEVELOPED YOUR GROWTH RATE COMPONENT?

A. Unlike the dividend yield, the investor growth rate cannot be directly observed but instead must be inferred through a review of available evidence. The growth rate in question is the *long-run* dividend per share growth rate, but analysts frequently use earnings growth as a proxy for (long-term) dividend growth. This is because in the long-run earnings are the ultimate source of dividend payments to shareholders, and this is likely to be particularly true for a large group of utility companies.

One possible approach is to examine historical growth as a guide to investor expected future growth, for example the recent five-year or ten-year growth in earnings, dividends and book value per share. However, my experience with utilities in recent years is that these historic measures have been very volatile and are not always reasonable or reliable as prospective measures.

The DCF growth rate should be prospective, and one potentially useful source of information on prospective growth is the projections of earnings per share (typically five years) prepared and published by securities analysts. It appears that Mr. Moul relies heavily on this information for his DCF studies, and I agree that it warrants substantial though not necessarily exclusive emphasis, particularly in light of current conditions.

Q. WHAT ARE THE DIFFICULTIES OF USING PROJECTED EARNINGS GROWTH AT THIS TIME?

A. Conditions are presently very unusual in that 2008 to 2009 has been a period of a particularly severe recession. This means that there is a danger today that the analyst earnings growth rates reported in publications (or on the Internet) reflect the assumption of economic recovery over the next several years from very depressed current levels. This does not mean these growth rates are "wrong," but it does mean that they may overstate the long-term, sustained growth rate that the DCF model requires. While I believe this is a much less serious problem for utilities than unregulated companies, it does suggest the need for caution in utilizing these earnings projections data as a proxy for long-run sustained growth, and the need for corroborating or checking the raw published growth rates against other pertinent measures of growth. I have done so as part of my DCF analysis.

S&P, which publishes projected earnings growth rates in its *Earnings Guide*, warns of this problem and urges caution in its "How to Use the Earnings Guide" instructions:

> A company which has reported poor or negative earnings may show a high projected growth rate due to its small [earnings] base.

Q. PLEASE DESCRIBE YOUR GROWTH RATE EVIDENCE.

A. Schedule MIK-4, page 3 presents four well-known sources of projected earnings growth rates. Three of these four sources -- First Call, Zacks and CNNfn -- provide averages from securities analyst surveys conducted by or for these organizations (typically reporting the median value). The fourth, Value Line, is that organization's own estimates. Value Line publishes its own projections using annual average earnings for a base period of 2007-2009 compared to a forecast period of 2013-2015.

As this schedule shows, the growth rates for individual companies vary somewhat among the four sources, but none of the four differs greatly from the overall average. These proxy group averages are 6.06 percent for CNNfn, 5.09 percent for First Call, 5.85 percent for Zacks and 4.33 percent for Value Line. It should be noted that Value Line is somewhat lower than the other three sources, while CNN is somewhat higher. For that reason, it is particularly useful to average together the four sources, which produces an overall average of 5.17 percent. To recognize uncertainty, I have identified a reasonable range of 5.0 to 5.5 percent which is approximately consistent with the earnings growth rates, along with other growth rate information that I have compiled on page 4 of that schedule.

Q. HAVE YOU SEEN OTHER EVIDENCE THAT SUGGESTS THE FIVE-YEAR EARNINGS GROWTH RATES COULD OVER-STATE THE LONG-TERM GROWTH RATE?

A. Yes. I consulted the March 2010 edition of *Blue Chip Economic Indicators*, a very well-known financial/economic publication that compiles short and long-term forecasts from major forecasting organizations. It publishes the forecast averages from nearly 40 such organizations which are referred to as the Blue Chip "consensus" results. The March 2010 edition includes a ten-year forecast of U.S. pre-tax profit growth. The growth rate consensus is as follows:

2010	-- 16.3%
2011	-- 8.0%
2012	-- 7.6%
2013	-- 6.6%
2014	-- 5.1%
2015	-- 4.8%
2016	-- 4.2%
2011 – 2015	-- 5.6%
2016 – 2020	-- 5.1%

This shows rapid growth in U.S. profits initially as an economic recovery takes hold, but then profit growth tails off and stabilizes at a lower level of growth. The average growth rate for the next five years is 5.6 percent per year (i.e., after 2010), but after that it slows to 5.1 percent per year. The slowing in growth rates would be for more notable if the period 2010 to 2015 were compared to the years after 2015, i.e., 8.7 percent versus 5.1 percent. This slow down pattern to some degree may also hold true for the proxy companies that both Mr. Moul and I have used. This very strongly suggests that the five-year earnings growth rates that both he and I may be overstated as representing long-run growth expectations that the DCF model requires.

Q. IS THERE ANY OTHER EVIDENCE THAT SHOULD BE CONSIDERED?

A. Yes. There are a number of reasons why investor expectations of long-run growth could differ from the limited, five-year earnings projections from securities analysts. Consequently, while securities analyst estimates should be considered and given significant weight, these growth rates also must be subject to a reasonableness test and corroboration, to the extent feasible.

On Schedule MIK-4, page 4 of 4, I have compiled three other measures of growth published by Value Line, i.e., growth rates of dividends and book value per share and long-run retained earnings growth. (Retained earnings growth reflects the growth over time one would expect from the reinvestment of retained earnings, i.e., earnings not paid out as dividends.) As shown on this schedule, these growth measures tend to be similar to or less than analyst growth projections. For the group, dividend growth averages 3.44 percent, book value growth averages 4.33 percent, and earnings retention growth averages 4.94 percent. Earnings retention is an important growth measure, and is approximately consistent with the 5.0 to 5.5 percent range.

Q. WHAT IS YOUR DCF CONCLUSION?

A. I summarize my DCF analysis on page 1 of Schedule MIK-4. The adjusted dividend yield for the six months ending March 2010 is 4.4 percent for this group. Available evidence would support a long-run growth rate in the range of approximately 5.0 to 5.5 percent (or less), as explained above. Summing the adjusted yield and growth rates produces a total return range of 9.4 percent to 9.9 percent. I have not included an adjustment factor for flotation expense given the fact that no public issuance of common stock has occurred within the last five years for SJI parent. (See the response to RCR-ROR-10.)

Q. MR. MOUL INCLUDES NEW JERSEY RESOURCES IN HIS PROXY GROUP WHEREAS YOU EXCLUDED IT. DOES THAT EXCLUSION MATERIALLY AFFECT YOUR DCF RESULTS AND 10.0 PERCENT ROE?

A. No. I excluded New Jersey Resources as a matter of consistency. That is, it had been excluded by a Company witness (i.e., Dr. Roger Morin) in another recent gas case in New Jersey (due to its non-regulated operations).

Had I included New Jersey Natural, however, the DCF results on Schedule MIK-4 would not change materially. For example, the inclusion of this company would cause the proxy group dividend yield to fall from 4.28 to 4.21 percent. With New Jersey Resources, the five-year analyst earnings growth rate increases from 5.17 percent to 5.27 percent. Similarly, the earnings retention growth rate for the proxy group would increase from 4.94 to 5.30 percent. Thus, the overall change in the DCF results if this company were to be included is negligible. It certainly is not large enough to alter my 10.0 percent ROE recommendation or my DCF return range.

Q. DO YOU HAVE ANY OTHER COMMENTS ON THE DCF RESULTS?

A. My nine proxy companies are viewed primarily as regulated utilities, although some do have material non-regulated activities. This would tend to have the effect of overstating the gas utility cost of equity, at last to a small degree. For example, Mr. Moul estimates that about one-quarter of SJI's assets are non-regulated, i.e., non-gas utility. Neither Mr. Moul nor I have made any downward adjustments to our DCF results to correct for this incremental, non-utility risk.

Q. IS SJG MORE LEVERAGED THAN THE PROXY GROUP COMPANIES?

A. No. Based on current balance sheet information and my 51 percent common equity ratio recommendation in this case, SJG is somewhat less leveraged than the proxy group as a whole. However, I have made no downward adjustment for this difference in debt leverage.

C. <u>DCF Study Using Mr. Moul's Proxy Group</u>

Q. HOW DID MR. MOUL SELECT HIS PROXY GROUP?

A. Mr. Moul used the same group as I did except he included New Jersey Resources (as discussed above) and he excluded three of my gas utility companies -- LaClede, NICOR and Southwest Gas. My understanding is that Mr. Moul excluded two of these companies because they lack "revenue decoupling" mechanisms, thereby allegedly rendering them "dissimilar" to SJG. In the case of Southwest Gas, Mr. Moul mentions that its service territory in the southwest part of the U.S. as a disqualification.

Q. DO YOU AGREE WITH THESE THREE EXCLUSIONS?

A. No, not without further more persuasive evidence. While revenue decoupling (or a southwest location) may be a difference, Mr. Moul has failed to demonstrate that this is a material difference for cost of capital estimation purposes sufficient to warrant exclusion. These companies are excluded presumably because (all else equal) they are at least slightly riskier than SJG. This would imply that my decision to include these three companies would render my DCF results conservatively high.

Q. HOW HAVE YOU CONDUCTED YOUR DCF STUDY FOR THIS GROUP?

A. I conducted my study in a manner very similar to my initial gas utility DCF study. I present my supporting data and calculations on Schedule MIK-5, pages 1-4. As shown on page 2 of that schedule, the dividend yield for the six months ending March 2010 is 4.16 percent. Using the standard "0.5g" forward adjustment, the going forward yield becomes 4.3 percent.

Please note that there has been a modest downward trend in dividend yields for these companies during this six-month period, consistent with the observed improvement in financial markets.

Q. HOW DID YOU DEVELOP YOUR GROWTH RATE ASSUMPTIONS?

A. For DCF purposes, I am using a growth range of 5.5 to 6.0 percent. Page 3 of Schedule MIK-5 shows the forecasted earnings growth rates from the same four sources used in my gas utility DCF study (Value Line, First Call, Zacks and CNNfn). This produces a proxy group average of 5.73 percent. While the projected earnings growth rates at this time may overstate expected long-term growth, as discussed earlier, my 5.5 to 6.0 percent range surrounds the average of these four growth rate sources. Notably, Mr. Moul assumed a 6.0 percent rate for this group.

Page 4 of 4 of Schedule MIK-5 presents three prospective growth measures published by Value Line – dividends per share, book value per share and earnings retention growth (growth from reinvesting earnings). Dividend growth is a relatively low 4.07 percent and may not be a reliable measure of long-term growth expectations. Book value and earnings retention growth for this group average 4.29 and 5.43 percent, respectively. The book value growth is somewhat low, but the 5.4 percent earnings retention growth is roughly consistent with the 5.5 to 6.0 percent range.

Q. USING THESE DATA INPUTS, WHAT IS YOUR ESTIMATED DCF COST RATE FOR THIS GROUP?

A. The DCF cost of equity is the adjusted yield (4.3 percent) plus growth average 5.5 to 6.0 percent), or 9.8 to 10.3 percent. Again, no flotation adjustment is warranted at this time. The midpoint cost of equity result is 10.1 percent, which is slightly higher than my primary gas utility DCF estimate of 9.7 percent.

D. <u>The CAPM Analysis</u>

Q. PLEASE DESCRIBE THE CAPM MODEL.

A. The CAPM is a form of the "risk premium" approach and is based on modern portfolio theory. Based on my experience, the CAPM is the cost of equity method most often used in rate cases after the DCF method, and it is one of Mr. Moul's three cost of equity methods. ("Comparable earnings" is not a market cost of equity method.)

According to this model, the cost of equity (K_e) is equal to the yield on a risk-free asset plus an equity risk premium multiplied by a firm's "beta" statistic. "Beta" is a firm-specific risk measure which is computed as the movements in a company's stock price (or market return) relative to contemporaneous movements in the broadly defined stock market (e.g., the S&P 500 or the New York Stock Exchange Composite). This measures the investment risk that cannot be reduced or eliminated through asset diversification (i.e., holding a broad portfolio of assets). The overall market, by definition, has a beta of 1.0, and a company with lower than average investment risk (e.g., a utility company) would have a beta below 1.0. The "risk premium" is defined as the expected return on the overall stock market minus the yield or return on a risk-free asset.

The CAPM formula is:

K_e = $R_f + \beta (R_m - R_f)$, where:

K_e = the firm's cost of equity

R_m = the expected return on the overall market

R_f = the yield on the risk free asset

β = the firm (or group of firms) risk measure.

Two of the three principal variables in the model are directly observable -- the yield on a risk-free asset (e.g., a Treasury security yield) and the beta. For example, Value Line publishes estimated betas for each of the companies that it covers, and Mr. Moul uses those betas to the exclusion of all other sources. The greatest difficulty, however, is in the measurement of the expected stock market return (and therefore the risk premium), since that variable cannot be directly observed.

While the beta itself also is "observable," different investor services provide different estimates of betas depending on the calculation methods that they use. Potentially, these differences can have large impacts on the CAPM results. In this case, both Mr. Moul and I use Value Line published betas, but for comparative purposes I note that other sources have somewhat different (and lower) utility betas, that would yield lower results. For that reason, I have reviewed other published sources, along with Value Line, to obtain a range of betas for comparative purposes. This is analogous to the procedure followed by Mr. Moul and me in using multiple published sources for DCF earnings growth rates rather than relying on just one published source.

Q. HOW HAVE YOU APPLIED THIS MODEL?

A. For purposes of my CAPM analysis, I have used a long-term Treasury yield as the risk-free return along with the average beta for the natural gas and electric proxy company groups. (See Schedule MIK-6, page 3 of 3, for the company-by-company betas.) In last six months, long-term Treasury yields have averaged approximately 4.50 percent, and the recent Value Line betas for my proxy group average about 0.67 (slightly less for Mr. Moul's groups). However, the Value Line betas generally tend to be higher than other available published betas, and the proxy group average for the three public sources that I have identified (Value Line, Yahoo Finance and MSN

Money) averages to about 0.4 to 0.5. Considering this range of evidence, I am using a conservatively high beta of 0.67, i.e., the average of my gas proxy company Value Line betas. I note that Mr. Moul also has elected to use a beta of 0.77 for his proxy companies (which are the Value Line betas of 0.66 after he has adjusted them upward for allegedly greater leverage). Finally, and as explained below, I am using a stock market equity risk premium range of 5 to 8 percent, although I see much less support for the upper end of that range.

Using these data inputs, the CAPM calculation results are shown on page 1 of Schedule MIK-6. My low-end cost of equity estimate uses a risk-free rate of 4.5 percent, a proxy group beta of 0.67 and an equity risk premium of 5 percent.

$$K_e = 4.5\ \% + 0.67\ (5.0) = 7.9\%$$

The upper end estimate also uses a risk-free rate of 4.5 percent, a proxy group beta of 0.67 and an equity risk premium of 8.0 percent.

$$K_e = 4.5\% + 0.67\ (8.0) = 9.9\%$$

Thus, with these inputs the CAPM provides a cost of equity range of about 8.0 to 10.0 percent, with a midpoint of 9.0 percent. (Again, a flotation cost adjustment is not needed at this time). The CAPM analysis produces a midpoint result lower than the range of results from my gas group DCF analyses, but I have not placed substantial reliance on the CAPM returns in formulating my return on equity recommendation in this case. This is because long-term Treasury yields at this time are somewhat lower than in the past due (in part) to the “flight to quality” concerns that I discussed earlier. At the present time, it is possible that the CAPM may somewhat understate the utility cost of equity, but it does confirm that my 10.0 percent recommendation is not unduly low.

Q. WHAT RESULT WOULD YOU OBTAIN USING MR. MOUL'S MARKET RISK PREMIUM?

A. For his CAPM studies, Mr. Moul has selected a market risk premium of 6.77 percent, which happens to be slightly above the midpoint of my range. Using this estimate (which I believe is flawed), the CAPM result is:

$$K_e = 4.5\% + 0.67\ (6.77) = 9.04\%$$

Q. IT APPEARS THAT A KEY ELEMENT IN YOUR CAPM STUDY IS YOUR EQUITY MARKET RETURN RISK PREMIUM OF 5 TO 8 PERCENT. HOW DID YOU DERIVE THAT RANGE?

A. There is a great deal of disagreement among analysts regarding the reasonably expected market return on the stock market as a whole, and therefore, the risk premium. In my opinion, a reasonable risk premium to use would be about 6 percent, which today would imply a stock market return of roughly 10.5 percent (i.e., 6.0 + 4.5 = 10.5 percent). Due to uncertainty concerning the true market return value, I am employing a broad range of 5 to 8 percent as the overall market equity risk premium, which would imply an annualized stock market equity return of about 9.5 to 12.5 percent for the overall stock market. The upper end is far less plausible than the midpoint or lower end.

Q. DO YOU HAVE A SOURCE FOR THAT RANGE?

A. Yes. The well-known finance textbook by Brealey, Myers and Allen (*Principles of Corporate Finance,* 8th Edition) reviews a broad range of evidence on the equity risk premium. The authors of the risk premium literature conclude:

> Brealey, Myers and Allen have no official position on the issue, but we believe that a range of 5 to 8 percent is reasonable for the risk premium in the United States. (page 154)

I note that Mr. Moul's risk premium selection is roughly consistent with the midpoint of that range.

There is one important caveat to consider regarding the 5 to 8 percent risk premium range that Brealy, *et al.* believe is supported by the professional literature (or their interpretation of that literature). It appears that the 5 to 8 percent risk premium range is relative to short-term Treasury yields, not long-term Treasury bond yields. At this time, the application of the CAPM using short-term Treasury yields would not be meaningful because those yields in recent months have approximated zero, and that is expected to continue. It therefore could be argued that the 5 to 8 percent range of Brealy, *et al*. is overstated (probably by 1 to 2 percentage points) if a long-term Treasury yield is used as the risk-free rate in the CAPM as both Mr. Moul and I have done.

V. MR. MOUL'S COST OF EQUITY ANALYSES

A. Overview of Mr. Moul's Methods

Q. HOW HAS MR. MOUL DEVELOPED HIS RETURN ON COMMON EQUITY RECOMMENDATION IN THIS CASE?

A. Mr. Moul employs four methods with three of the methods being "market models of the cost of equity." (Testimony, page 5) The fourth method, "Comparable Earnings," is neither market-based nor is it a method that estimates the utility cost of capital. For that reason, this fourth method appears to be given little or no weight in Mr. Moul's recommendation in this case. Since Comparable Earnings seems to have little practical importance in this case, I do not devote much time to discussing that method.

The three market-based methods produce the following results: (1) DCF -- 11.45 percent; (2) Risk Premium -- 11.72 percent; and (3) CAPM -- 10.87 percent. Mr. Moul states that he assigns no specific weights to these results (response to RCR-ROR-16), but the simple average of the three is 11.35 percent. His Comparable Earnings study produces a much higher results, i.e., 16.25 percent. A key point is that Mr. Moul (more or less) relies on a proxy group of "revenue decoupling" utilities. His ROE recommendation is based on the assumption of the continuation of such a mechanism for SJG. (Testimony, page 9) Moreover, he asserts that the approval by the Board of the requested reliability tracker will not materially improve SJG's risk profile. Thus, according to Mr. Moul, the approval of the reliability tracker will not provide customers with a rate of return benefit.

Q. IS MR. MOUL'S FOCUS ON DECOUPLING IN PROXY COMPANY SELECTION WARRANTED?

A. No, I don't believe so, and he has not adequately supported his approach. His mistake is in elevating this one business attribute over all other factors affecting proxy company risk comparability. Using this approach, he ends up with a seven-company proxy group that is smaller than it needs to be. He has not shown that decoupling is of such momentous importance that only companies with that attribute can be considered "comparable" to SJG for cost of capital estimation purposes.

Q. IN SUMMARIZING HIS RESULTS, MR. MOUL STATES THAT HIS 11.6 PERCENT RECOMMENDATION DOES NOT ACCOUNT FOR THE FACT THAT SJG MAY FAIL TO EARN ITS AUTHORIZED RETURN. (PAGE 16) IS THIS ASSERTION CORRECT?

A. No, it is incorrect. I assume that the purpose of this statement is to leave the impression that his 11.5 percent ROE recommendation is conservatively low. However, this assertion is wrong because investors fully understand when investing in utility stocks the regulated authorized returns are only expectational and not guarantees. Indeed, if that were not the case, then SJG would be entitled only to a risk-free return. My 10.0 percent return recommendation, which is based on actual market data, recognizes that SJG's earnings are at risk. However, that risk is modest compared to earnings risks facing unregulated companies.

Q. MR. MOUL FURTHER CRITICIZES THE DCF ANALYSIS DUE TO ALLEGED "CIRCULARITY," FAILURE TO CAPTURE CHANGES IN THE MARKET/BOOK RATIO AND DISREGARDING MARKET VERSUS BOOK DISPARITIES. ARE THESE CRITICISMS CORRECT?

A. No, again he is incorrect. The foundation of the DCF model is the use of actually observed company share prices that result from investor buying and selling activity. Those share prices embody the information available to investors, which includes *all* perceived risks. Because share prices of these companies are unregulated and free to move with market conditions, there can be no "circularity." Moreover, the cost of equity is a pure "market price" and has nothing to do with book value, which is an accounting concept. (Indeed, this is why "Comparable Earnings" is not a market-based model, as Mr. Moul acknowledges). While the DCF model (i.e., the version Mr. Moul uses) does not assume any specific changes in the price earnings ratio, I see nothing in Mr. Moul's testimony that suggests investors are anticipating an increase over time in that ratio. That is, he has no factual basis for his criticism.

B. <u>The DCF Model</u>

Q. HOW DOES MR. MOUL OBTAIN HIS 11.45 PERCENT DCF ESTIMATE?

A. Using market data from earlier this year and his gas proxy group, he calculates an adjusted dividend yield of 4.40 percent. After reviewing an array of growth data from Value Line and other sources, he concludes that investors expect long-run annualized growth for these companies of 6.0 percent. He then adds one more somewhat mysterious factor -- 0.82 percent for "leverage." (I discuss the leverage issue separately in subsection (C) below.) These study elements produce:

$$K_e = 4.40 + 6.0 + 0.82 = 11.45\%$$

His final adjustment is to add 0.22 percent for flotation expense.

Q. HOW DID MR. MOUL OBTAIN HIS 6.0 PERCENT DCF GROWTH FACTOR?

A. He examined an array of growth measures, both historical and projected, and he clearly favors the projected measures. However, the 6.0 percent figure conclusion is judgmental and does not appear to be the result of any specific calculation. His projected growth factors are listed below (as provided in response to RCR-ROR-21):

Earnings (First Call)	5.93%
Earnings (Zacks)	6.54%
Earnings (Value Line)	5.07%
Dividends (Value Line)	4.57%
Book Value (Value Line)	4.71%
Cash Flow (Value Line)	3.64%
Earnings Retention (Value Line)	5.29%
Average	**5.11%**

These various measures average to 5.11 percent, not 6.0 percent. Moreover, only one of his seven growth rate measures even exceeds 6.0 percent.

Q. WHAT DO YOU CONCLUDE?

A. One of the keys to Mr. Moul's DCF result is his assumed growth rate of 6.0 percent. His derivation of this growth rate is vague, and the seven growth measures that he cites imply that 6.0 percent is a somewhat high side estimate. Although I have accepted his 6.0 percent as an upper bound, there is an abundance of evidence that could support a growth rate conclusion that is somewhat less than 6.0 percent.

C. The Merits of the "Leverage" Adjustment

Q. MR. MOUL INCLUDES AN ADDER TO HIS DCF ESTIMATE FOR "LEVERAGE." WHAT EXPLANATION DOES HE PROVIDE?

A. This is discussed at pages 28-34 of his testimony. Quite simply, Mr. Moul's "leverage" adjustment provides additional return compensation to investors to recognize the fact that standard utility ratemaking employs a utility's book value capital structure instead of a market value capital structure.[2] A company's market value capital structure has a thicker equity ratio than a book value capital structure if that company has a market-to-book ratio greater than 1.0. That is, in fact, the case

[2] At page 28, he states: "If book values are used to compute capital structure ratios, then an adjustment is required." In other words, Mr. Moul seeks to "correct" standard, cost-based ratemaking by increasing the return on equity above the cost of equity.

with most utilities today including Mr. Moul's gas proxy group. According to Mr. Moul, that group has (on average) a 69.59 percent book equity ratio and a 56.0 percent market equity ratio. Using these data, he calculates the 82 basis point adjustment, as shown in his Appendix E-12. His adjustment is quite large, and it must be rejected as fundamentally at odds with cost-based ratemaking. It has nothing to do with the cost of equity.

Q. IS THERE A DIFFERENCE BETWEEN SJG MARKET VERSUS BOOK CAPITAL STRUCTURE?

A. No, SJG does not have a market-based capital structure because its stock is not publicly traded. It is wholly-owned by SJI and only has a book capital structure. It has been standard practice in New Jersey and other states to employ book capital structures (assuming such capital structures are reasonable) for utility ratemaking, just as regulators also use book value rather than market value rate base. No additional shareholder compensation is required simply because either utilities or utility holding companies have market-to-book ratios greater than 1.0. Similarly, if the market-to-book ratio was less than 1.0 (for example, a distressed utility), it would not be proper to decrement the DCF result, thereby reducing shareholder compensation below the DCF return.

Q. IS MR. MOUL'S ADJUSTMENT PART OF THE DCF COST OF EQUITY?

A. No, it is an adder to the DCF cost of equity, unless Mr. Moul is willing to argue that SJG has a *higher* cost of equity than his proxy group. He makes no such argument, nor does he argue that SJG is more leveraged than the proxy group. DCF theory is very clear that the cost of equity can be calculated as "yield plus growth," and this fully accounts for all investment risk and investor requirements, including leverage. For example, assume the DCF analysis for the proxy group produces a 10.0 percent result based on a dividend yield of 5.0 percent and a consensus long-run growth rate of 5.0 percent. This result states that investors expect and therefore require (on average) a 10.0 percent long-run annualized return to hold these stocks. In expressing this return requirement, investors are fully aware of the market capital structures of these companies, the book values of these companies *and* the fact that state regulators set rates based on book value capital structure. This knowledge is fully reflected in the stock prices and dividend yields. By their own market behavior, investors are *not* requiring the leverage adjustment that Mr. Moul proposes, although I am sure that they would not mind receiving the additional earnings that his adjustment provides.

Mr. Moul's adjustment is totally contrary to accepted DCF theory, as well as regulatory practice.

Q. IS MR. MOUL'S ADJUSTMENT ACCEPTED IN THE REGULATORY COMMUNITY?

A. To my knowledge, this type of adder has received little or no regulatory acceptance before state or federal regulatory commissions.

Q. IS IT YOUR POSITION THAT A LEVERAGE ADJUSTMENT COULD NEVER BE JUSTIFIED?

A. No, all else equal, debt leverage could be a factor (though not the only factor) in determining a company's cost of equity, and in that context such an adder could be considered (along with other risk attributes). For example, if SJG has a significantly more leverage capital structure than the gas proxy group as a whole, then potentially, a leverage adjustment could be proposed, consistent with financial theory. The argument here would be that SJG is *riskier* than the proxy group (due to its greater leverage), and therefore the 10.0 percent DCF result -- while accurate for the proxy group -- is too low a cost rate for SJG. In this case, however, SJG is simply *not* more leveraged than the proxy group, and therefore no adjustment is needed. For example, I recommend a 51.0 percent equity ratio for SJG compared to about 48 percent for the proxy group.

Moreover, Mr. Moul is not claiming that SJG is either more leveraged or more risky than his proxy group. He makes it clear that the issue is one of providing additional compensation to investors because the Board uses a book value capital structure in setting rates (which is what Mr. Moul himself proposes in this case). To be clear, Mr. Moul's disagreement is with the practice of cost-based ratemaking and whether that paradigm provides adequate investor compensation.

Q. DOES MR. MOUL CITE ANY EXPERT AUTHORITY FOR A MARKET-TO-BOOK ADJUSTMENT IN THE DCF STUDY?

A. No. Standard financial theory is very clear that, assuming the data inputs are accurate, the DCF model calculates the cost of equity. No further adjustment is needed unless the DCF proxy company group differs in risk from the subject utility -- which is not the case here.

Mr. Moul attempts to cite in connection with his adjustment the seminal work of Miller/Modigliani (of more than 30 years ago) that recognized that a company's leverage could affect its cost of equity. The discussion in my testimony fully recognizes that. However, Mr. Moul, in my opinion, takes Miller/Modigliani out of context. Their published work does not address public utility ratemaking practices, including the appropriateness regulators setting rates based on book value capital structure as opposed to market value. To my knowledge, they have never expressed an opinion on whether an "adder" to the DCF cost of equity result is needed due to the normal regulatory practice of using book value capital structure in order to further compensate investors.

Q. DOES MR. MOUL UTILIZE THE LEVERAGE ADJUSTMENT IN ANY OTHER COST OF EQUITY STUDY?

A. Yes. He also includes it in his CAPM study, but he does not appear to use it in his Risk Premium study. Rather than including it as an "adder," his CAPM study uses leverage as a means of increasing the published proxy group beta from its actual value (at that time) of 0.66 to 0.77. This is an improper "adder" that increases his CAPM study results by 0.74 percent ((0.77 - 0.66) x 6.77%).

Q. HOW DOES MR. MOUL OBTAIN HIS 0.22 PERCENT ADJUSTMENT FOR FLOTATION EXPENSE?

A. This is a calculation that is based on generic data from the gas utility industry (see his Schedule 10). However, he provides no data for historical or anticipated flotation expense for either SJG or SJI parent. Consequently, he provides no tangible evidence that SJG needs a "flotation adder" to its ROE or that there are flotation expenses (historic or prospective) that warrant inclusion in rates.

D. <u>Risk Premium</u>

Q. HOW DID MR. MOUL CALCULATE HIS RISK PREMIUM COST OF EQUITY?

A. Mr. Moul calculated the long-term historical returns on the Standard & Poors (S&P) utility index going back to 1928 and compares that to the long-term returns on utility bonds over that same time. He calculates average returns over various historical subperiods and calculates "average" historical returns using at least three different methods. Combining certain results, he finds what he calls a "reasonable" risk premium of 6.23 percentage points. However, he concludes that the S&P utility group is riskier than SJG, so he selects a lower risk premium of 5.5 for the Company (i.e., a 73 basis point reduction). Finally, he selects 6.0 percent as a representative current (or expected) yield on single-A utility bonds. The sum of the forecasted 6.0 percent bond yield and a 5.5 percent adjusted Risk Premium produces his Risk Premium cost of equity estimate of 11.5 percent. Finally, he adds 0.22 percent for flotation expense, obtaining 11.72 percent.

Q. HOW DID MR. MOUL CALCULATE THE 73 BASIS POINT DIFFERENCE BETWEEN THE SJG AND S&P INDEX RISK PREMIUM?

A. This is not clear because no calculation is shown for this adjustment. Mr. Moul shows a listing of the S&P utilities on page 3 of his Schedule 4 (page 3 of 3). Only one of the companies in this group is included in either his or my gas proxy group. The vast majority of these companies are vertically-integrated electric companies, including electrics with extensive unregulated merchant generation operations, such as Constellation, Public Service Enterprise, PPL Corp., Allegheny Energy, Sempra Energy, Exelon Corp., Entergy Corp., TXU Corp., etc. While some of the members of this S&P group are mainly utilities, the group as a whole is not a very good proxy for SJG's gas utility distribution operations. Mr. Moul recognizes that a significant downward risk adjustment factor is needed.

Q. IS MR. MOUL'S S&P UTILITY INDEX HISTORICAL ANALYSIS AN ACCEPTED METHOD OF ESTIMATING THE COST OF CAPITAL?

A. No, I do not believe this is an accepted method, even for the mainly electric utility/merchant generators that comprise this group. At best, this shows the long-term historical investment experience for this Index, but Mr. Moul does not explain why or how this method reliably estimates today's cost of equity.

It is true that financial analysts sometimes use historical stock market data as a benchmark measure of the risk premium, but the reliability of historical returns as being prospective measures is controversial. However, when such historical returns averages are used by analysts it is almost always for the stock market as a whole (such as the S&P 500), not for an individual company or industry. For example, it is not common practice to use historical returns data for individual industries such as the chemical industry, banking, automobiles, etc. to measure the cost of capital (or risk premia) for those industries.

Q. DOES THE HISTORIC RETURNS DATA USED BY MR. MOUL SUPPORT HIS 11.5 PERCENT COST OF EQUITY RESULT?

A. No. One problem with Mr. Moul's historic returns study is that he fails to update for the large stock market losses that occurred in 2008. Mr. Moul computes the long-term historic (i.e., 1928-2007) risk premium as 5.52 percent using the arithmetic mean measure and 3.74 percent using the geometric return measure.[3] Utility stocks experienced large, negative returns (and a large, negative risk premium) in 2008. Thus, inclusion of 2008 data would substantially reduce his historic average 5.52 and 3.74 percent risk premiums (i.e., arithmetic and geometric, respectively).

Applying Mr. Moul's adjustment for SJG's lower risk (i.e., his 88 percent factor) and including the current single-A bond yield of 6.0 percent[4] produces in the following results:

Arithmetic Mean: 5.52% x 88% + 6.0% =	10.86%
Geometric Mean: 3.47% x 88% + 6.0% =	9.05%
Average:	**9.96%**

[3] Mr. Moul also presents one additional measure, the median. However, the median is *not* an accepted measure of historic long-run market returns or the historic risk premium. His median values should be disregarded as irrelevant to a historical returns analysis.

[4] Mr. Moul used a projected 6.0 percent, single-A utility bond cost rate, but the actual is currently about 6.0 percent. However, the 9+3 update estimates SJG's cost of new long-term debt at 5.5 percent.

The long-term historic data supports a cost of equity no higher than 10.0 percent, and that is before incorporating the 2008 market losses. It further assumes that the S&P utilities (which are mostly vertically-integrated and/or unregulated electrics) are an acceptable proxy group for SJG.

Q. WHAT DO YOU CONCLUDE CONCERNING THE RISK PREMIUM ANALYSIS?

A. Mr. Moul's 11.72 percent risk premium cost of equity is not supported by his own data, particularly when updated to include the large negative equity premium experienced in 2008. While a corrected and updated analysis would support my 9.4 to 10.3 percent DCF range, the Board should place no reliance on this method.

E. CAPM Study

Q. HOW DID MR. MOUL DERIVE HIS CAPM ESTIMATE?

A. Mr. Moul begins with the standard CAPM adopting a proxy group beta of 0.66 (obtained from Value Line), a prospective cost of long-term Treasury debt of 4.5 percent and a stock market risk premium of 6.77 percent. In addition, he adds three discrete adjustments, all of which improperly inflate his CAPM final result:

- A leverage adjustment that increases the proxy group beta (published by Value Line) from 0.66 to 0.77 (as discussed earlier); and
- A "size" adjustment that adds 0.94 percent (94 basis points) to the final result.
- The flotation adjustment of 0.22 percent discussed earlier.

These inputs and adjustments produce his 11.8 percent cost of equity:

$$K_e = 4.5\% + 0.77\ (6.77) + 0.22 = 10.87\%$$

Q. WHAT WOULD HIS RESULT BE WITHOUT THESE THREE IMPROPER ADJUSTMENTS?

A. If the two adjustments were removed, his cost of equity estimate would be:

$$K_e = 4.5\% + 0.66(6.77\%) = 8.97\%$$

Q. WHAT ARE YOUR CONCERNS WITH MR. MOUL'S CAPM ANALYSIS?

A. There are several flaws in Mr. Moul's analysis that lead him to seriously overstate his cost of equity estimate using this model. I already have discussed two of these problems in connection with his DCF study, namely, his flotation adjustment and his improper "leverage" adjustment. The latter adjustment leads Mr. Moul to improperly increase the Value Line proxy group betas from 0.66 to 0.77.

There are two other very large errors in his study. The first and most serious error is his inclusion of a 0.94 percent ROE "adder" for SJG's small size. His second error is his selection of an overall stock market risk premium of 6.77 percent. While the 6.77 percent is not outside of the range of reasonableness, I disagree with some of the data that he used to derive it.

Q. WHAT ANALYSIS DOES MR. MOUL PROVIDE IN SUPPORT OF HIS SIZE ADJUSTMENT OF 0.94 PERCENT?

A. Other than noting that SJG is smaller, on average, than the average S&P 500 company, he performs no analysis of his own to estimate how size may affect the cost of equity. Instead, he cites to evidence from a short article published in *Public Utilities Fortnightly.*

Q. DOES THE EVIDENCE CITED BY MR. MOUL SUPPORT A RISK ADJUSTMENT?

A. No, it does not, for several reasons. First, an assertion of a size risk factor contradicts modern portfolio theory. Specifically, small companies can be combined by investors into portfolios in order to eliminate risk that is purely due to size. Second, the empirically observed “small stock volatility,” which is simplistically interpreted as “small size risk,” may not due to size *per se* but rather to the maturity of the firm, i.e., where the firm is in its life cycle. For example, a biotech start-up firm is likely to be viewed as riskier than a large, mature pharmaceutical company. However, it obviously would be erroneous to attribute this greater risk to the biotech’s size. In other words, the statistically-observed size premium may be spurious.

The key point is that the size risk premium – if it exists at all – may have little to do with pure utility companies. Mr. Moul presents no evidence that a *utility* with, for example, a $1 billion capitalization is any riskier (all else equal) than an $8 billion utility. He cites to no empirical studies in that regard that specifically focus on utilities.

Q. ARE THERE ANY OTHER REASONS TO DOUBT THE VALIDITY OF HIS SIZE ADJUSTMENT?

A. Yes. In his Appendix I (page I-4), Mr. Moul estimates the cost of equity for the S&P 500 (primarily unregulated companies) to be 10.28 percent. Mr. Moul’s CAPM (which incorporates 0.94 percent as a size adder) obtains 10.87 percent. In other words, the size adjustment leads to the absurd result that SJG -- a low risk utility -- has a higher cost of equity than the S&P 500.

Q. HOW DID HE OBTAIN HIS 6.77 PERCENT RISK PREMIUM?

A. Mr. Moul cites to three measures of the market risk premium. Two are relatively conventional, but the third is unquestionably wrong. The two conventional measures include (a) the use of historical S&P 500 market returns data prepared by Ibbotson, and (b) a DCF calculation of the S&P 500. Most analysts would acknowledge that the S&P 500 provides a reasonable (though not perfect) representation of the U.S. stock market. The historic returns – derived risk premium, relative to long-term

Treasury securities, is 6.05 percent. Mr. Moul's S&P 500 DCF analysis employs a dividend yield of 1.95 percent and a projected earnings growth rate of 8.25 percent, as follows:

$$S\&P\ 500\ K_e = 1.95\%\ (1.04) + 8.25\% = 10.28\%$$

With a Treasury yield of 4.5 percent, this produces a risk premium of 5.8 percent.

In summary, Mr. Moul's two conventional measures produce a risk premium of about 6 percent, or slightly less. This is fully consistent with my 5 to 8 percent range discussed in Section IV of my testimony.

Q. WHAT IS MR. MOUL'S UNCONVENTIONAL MEASURE?

A. His third measure uses data published by Value Line referred to as the stock price "Appreciation Potential." This is a figure published by Value Line that purportedly represents the amount by which the median stock in Value Line's 1,700-company data base might appreciate in price over the next 3 to 5 years. Mr. Moul uses these data to calculate an annualized return of 13.68 percent, providing a risk premium value of about 9.2 percent. This is clearly an excessive result that cannot be found anywhere in the professional risk premium literature.

Q. WHY IS THIS MEASURE INCORRECT?

A. The risk premium used in the CAPM must be based upon some reasonable measure of the overall stock market, and the S&P 500 studies reasonably comply with that requirement. Mr. Moul's Value Line calculation for the "median company," however, makes no attempt to meet that requirement. At best, it is an attempt to measure a "potential return" for the median Value Line stock, but it is *not* a measure of even the "potential" stock market return. This is a fatally-flawed procedure and has no place in a valid CAPM analysis.

While this “Appreciation Potential” clearly is wrong as a measure of the overall stock market return, it is averaged in with other risk premium estimates that are far more reasonable. The result is a market risk premium of 6.77 percent, which falls in the range of reasonableness.

F. <u>Comparable Earnings</u>

Q. HOW DID MR. MOUL CONDUCT HIS COMPARABLES EARNINGS STUDY?

A. Mr. Moul selected a group of unregulated companies that appear to have relatively stable operating profiles. He compiled both their historical earned returns on equity and their projected equity returns. On a historical basis, their earned returns average 16.7 percent, and on a projected basis they average 15.8 percent. The average of the two measures is 16.25 percent.

Mr. Moul’s derivation of these accounting returns is curious. He begins by selecting nine companies, and he compiles their historic and (Value Line) projected earned returns. These average to 29.9 percent historic and 29.4 percent projected, it then appears that he throws out six of his nine companies, leaving a mere three companies, to obtain the Comparable Earnings figures that he reports in his testimony. (See his Schedule 14, page 2 of 2.) Hence, his Comparable Earnings finding ends up being based on only three companies.

Q. IS THIS A COST OF EQUITY METHOD?

A. No, it is not. These are pure accounting results and no market data is employed in the analysis. As a result, Mr. Moul disregards this information in deriving his 11.5 percent return on equity recommendation, and he acknowledges that it is not a market-based cost method.

Q. DO THESE ACCOUNTING FIGURES TELL US ANYTHING ABOUT INVESTOR RETURN REQUIREMENTS?

A. No. The main problem is that these stocks normally sell at large premiums to their book values. While a given non-regulated company might have an accounting return on equity of 20 percent, if its shares are selling at two to three times book value per share, investors purchasing the stock at that price very likely expect to realize (and therefore require) market returns much lower than that 20 percent. It is for this reason that the accounting ROEs are of little interest to investors, and this measure is irrelevant to the "capital attraction" standard. Investors tend to focus far more on the relationship of earnings to the market price of the stock.

Q. ARE THERE OTHER MEASUREMENT OR CONCEPTUAL PROBLEMS WITH THE COMPARABLE EARNINGS METHOD, AS USED BY MR. MOUL?

A. Yes, there are other problems. The measurement of accounting returns on equity for non-regulated firms frequently is distorted by accounting write offs. These write offs would be reflected as reductions to the equity balance, thereby inflating the reported accounting ROE. For example, if company has $15 of earnings and $150 of equity, the ROE is 10 percent. If the company subsequently takes a $50 accounting write-off, the calculated ROE then becomes $15/$100 = 15%. These accounting write-offs that inflate the measured rate of return are common and often very large for unregulated companies, but have nothing to do with SJG regulated return requirement.

A conceptual problem with the Comparable Earnings method is that the earnings reported by Mr. Moul (i.e., the numerator of the reported ROEs) can be strongly influenced by the exercise of market or monopoly power. This refers to profits earned by successful companies due to certain favorable circumstances that exceed the competitive level of profits. Such monopoly profits could be attributable to circumstances that are entirely legal such as patent protection, unusually favorable access to key resources or a company's unique product line offering. Mr. Moul has conducted no analysis to determine whether or not the profitability results that he cites in his Comparable Earnings study are from markets deemed to be fully competitive. Profits associated with market power cannot be used as a standard for either setting or evaluating SJG's fair return.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, it does.

SCHEDULES MIK-1 THROUGH MIK-6

SOUTH JERSEY GAS COMPANY

Pro Forma Rate of Return Summary Estimated at
June 30, 2010

Capital Type	Balance[1] (Thousands $)	% of Total	Cost Rate	Weighted Cost
Long-Term Debt	$390,000	43.06%	5.83[1]	2.51%
Short-Term Debt	54,010	5.96	2.0	0.12
Common Equity	461,633	50.97	10.0	5.10
Total	$905,643	100.00%	--	7.73%

[1] Exhibit PRM-1, Schedule 1, page 1; Schedule 5, page 1; Schedule 6, pages 1-3 (9 + 3 Update)

SOUTH JERSEY GAS COMPANY

Short-Term Debt and CWIP Balances and Cost Rates for
July 2009 - June 2010
(Thousands $)

	Debt Balance	Interest Rate	CWIP Balance
July 2009	$95,385	0.82%	$19,461
August	98,557	0.77	23,464
September	92,103	0.70	29,955
October	92,777	0.70	32,195
November	106,075	0.86	46,804
December	109,417	0.72	43,581
January 2010	105,512	0.72	45,232
February	92,098	0.63	50,732
March	65,677	NA	58,472
April (Est.)	61,370	NA	10,713
May (Est.)	66,171	NA	13,503
June (Est.)	47,064	NA	9,966
Average	**$86,017**	**0.74%**	$32,007

Source: Response to RCR-ROR-11 and Exhibit PRM-1, Schedule 5, page 1 (9 + 3 Update).

SOUTH JERSEY GAS COMPANY

U.S. Historic Trends in Capital Costs

	Annualized Inflation (CPI)	10-Year Treasury Yield	3-Month Treasury Yield	Single A Utility Yield
1992	3.0%	7.0%	3.5%	8.7%
1993	3.0	5.9	3.0	7.6
1994	2.6	7.1	4.3	8.3
1995	2.8	6.6	5.5	7.9
1996	3.0	6.4	5.0	7.8
1997	2.3	6.4	5.1	7.6
1998	1.6	5.3	4.8	7.0
1999	2.2	5.7	4.7	7.6
2000	3.4	6.0	5.9	8.2
2001	2.9	5.0	3.5	7.8
2002	1.6	4.6	1.6	7.4
2003	1.9	4.1	1.0	6.6
2004	2.7	4.3	1.4	6.2
2005	3.4	4.3	3.0	5.6
2006	2.5	4.8	4.8	6.1
2007	2.8	4.6	4.5	6.3
2008	3.8	3.4	1.6	6.5
2009	(0.4)	3.2	0.2	6.0

SOUTH JERSEY GAS COMPANY

U.S. Historic Trends in Capital Costs
(Continued)

	Annualized Inflation (CPI)	10-Year Treasury Yield	3-Month Treasury Yield	Single A Utility Yield
2002				
January	1.1%	5.0%	1.7%	7.7%
February	1.1	4.9	1.7	7.5
March	1.5	5.3	1.8	7.8
April	1.6	5.2	1.7	7.6
May	1.2	5.2	1.7	7.5
June	1.1	4.9	1.7	7.4
July	1.5	4.7	1.7	7.3
August	1.8	4.3	1.6	7.2
September	1.5	3.9	1.6	7.1
October	2.0	3.9	1.6	7.2
November	2.2	4.1	1.3	7.1
December	2.4	4.0	1.2	7.1
2003				
January	2.6%	4.1%	1.2%	7.1%
February	3.0	3.9	1.2	6.9
March	3.0	3.8	1.1	6.8
April	2.1	4.0	1.1	6.6
May	2.1	3.6	1.1	6.4
June	2.1	3.7	0.9	6.2
July	2.1	4.0	0.9	6.6
August	2.2	4.5	1.0	6.8
September	2.3	4.3	1.0	6.6
October	2.0	4.3	0.9	6.4
November	1.8	4.3	1.0	6.4
December	1.8	4.3	0.9	6.3
2004				
January	1.9%	4.2%	0.9%	6.2%
February	1.7	4.1	0.9	6.2
March	1.7	3.8	0.9	6.0
April	2.3	4.4	0.9	6.4
May	3.1	4.7	1.0	6.6
June	3.3	4.7	1.3	6.5
July	3.0	4.5	1.4	6.3
August	2.7	4.3	1.5	6.1
September	2.5	4.1	1.6	6.0
October	3.2	4.1	1.8	5.9
November	3.5	4.2	2.1	6.0
December	3.3	4.2	2.2	5.9

SOUTH JERSEY GAS COMPANY

U.S. Historic Trends in Capital Costs
(Continued)

	Annualized Inflation (CPI)	10-Year Treasury Yield	3-Month Treasury Yield	Single A Utility Yield
2005				
January	3.0%	4.2%	2.4%	5.8%
February	3.0	4.2	2.6	5.6
March	3.1	4.5	2.8	5.8
April	3.5	4.3	2.8	5.6
May	2.8	4.1	2.9	5.5
June	2.5	4.0	3.0	5.4
July	3.2	4.2	3.3	5.5
August	3.6	4.3	3.5	5.5
September.	4.7	4.2	3.5	5.5
October	4.3	4.5	3.8	5.8
November	3.5	4.5	4.0	5.9
December	3.4	4.5	4.0	5.8
2006				
January	4.0%	4.4%	4.3%	5.8%
February	3.6	4.6	4.5	5.8
March	3.4	4.7	4.6	6.0
April	3.5	5.0	4.7	6.3
May	4.2	5.1	4.8	6.4
June	4.3	5.1	4.9	6.4
July	4.1	5.1	5.1	6.4
August	3.8	4.9	5.1	6.2
September	2.1	4.7	4.9	6.0
October	3.5	4.7	5.1	6.0
November	2.5	4.6	5.1	5.8
December	2.5	4.6	5.0	5.8

SOUTH JERSEY GAS COMPANY

U.S. Historic Trends in Capital Costs
(Continued)

	Annualized Inflation (CPI)	10-Year Treasury Yield	3-Month Treasury Yield	Single A Utility Yield
2007				
January	2.1%	4.8%	5.1%	6.0%
February	2.4	4.7	5.2	5.9
March	2.8	4.6	5.1	5.9
April	2.6	4.7	5.0	6.0
May	2.7	4.8	5.0	6.0
June	2.7	5.1	5.0	6.3
July	2.4	5.0	5.0	6.3
August	2.0	4.7	4.3	6.2
September	2.8	4.5	4.0	6.2
October	3.5	4.5	4.0	6.1
November	4.3	4.2	3.4	6.0
December	4.1	4.1	3.1	6.2
2008				
January	4.3%	3.7%	2.8%	6.0%
February	4.0	3.7	2.2	6.2
March	4.0	3.5	1.3	6.2
April	3.9	3.7	1.3	6.3
May	4.2	3.9	1.8	6.3
June	5.0	4.1	1.9	6.4
July	5.6	4.0	1.7	6.4
August	5.4	3.9	1.8	6.4
September	4.9	3.7	1.2	6.5
October	3.7	3.8	0.7	7.6
November	1.1	3.5	0.2	7.6
December	0.1	2.4	0.0	6.5

SOUTH JERSEY GAS COMPANY

U.S. Historic Trends in Capital Costs
(Continued)

	Annualized Inflation (CPI)	10-Year Treasury Yield	3-Month Treasury Yield	Single A Utility Yield
2009				
January	0.0%	2.5%	0.1%	6.4%
February	0.2	2.9	0.3	6.3
March	(0.4)	2.8	0.2	6.4
April	(0.7)	2.9	0.2	6.5
May	(1.3)	2.9	0.2	6.5
June	(1.4)	3.7	0.2	6.2
July	(2.1)	3.6	0.2	6.0
August	(1.5)	3.6	0.2	5.7
September	(1.3)	3.4	0.1	5.5
October	(0.2)	3.4	0.1	5.6
November	1.8	3.4	0.1	5.7
December	2.5	3.6	0.1	5.8
2010				
January	2.6%	3.7%	0.1%	5.8%
February	2.1	3.7	0.1	5.9
March	2.3	3.7	0.2	5.8
April	2.2	3.9	0.2	5.8(P)

Sources: *Economic Report of the President, Mergent's Bond Record, Federal Reserve Statistical Release, Consumer Price Index Summary*

SOUTH JERSEY GAS COMPANY

Listing of the Gas Utility Proxy Companies

	Company	Safety Rating	Financial Strength	Beta	2009 Common Equity Ratio*
1.	AGL Resources	2	B++	0.75	48.0%
2.	Atmos Energy	2	B+	0.65	50.1
3.	LaClede Group	2	B+	0.60	57.1
4.	Nicor, Inc.	3	A	0.70	67.6
5.	NW Natural Gas	1	A	0.60	52.3
6.	Piedmont Natural	2	B++	0.65	55.9
7.	South Jersey Ind.	2	B++	0.60	63.5
8.	Southwest Gas	3	B	0.75	46.5
9.	WGL Corp.	1	A	0.65	65.0
	Average	**1.9**	**--**	**0.67**	**56.2%**

* The common equity ratio excludes short-term debt (and current maturities of long-term debt). Actual 2009 year-end equity ratio including short-term debt and current maturities of long-term debt averages 48.3 percent.

Source: *Value Line Investment Survey*, March 12, 2010.

SOUTH JERSEY GAS COMPANY

Listing of Mr. Moul's Gas Utility Proxy Companies

	Company	Safety Rating	Financial Strength	Beta	2009 Common Equity Ratio*
1.	AGL Resources	2	B++	0.75	48.0%
2.	Atmos Energy	2	B+	0.65	50.1
3.	New Jersey Resources	1	A	0.65	60.2
4.	NW Natural Gas	1	A	0.60	52.3
5.	Piedmont Natural	2	B++	0.65	55.9
6.	South Jersey Ind.	2	B++	0.60	63.5
7.	WGL Corp.	1	A	0.65	65.0
	Average	**1.6**	**--**	**0.65**	**56.4%**

* The common equity ratio excludes short-term debt (and current maturities of long-term debt). Actual 2009 year-end equity ratio including short-term debt and current maturities of long-term debt averages 48.3 percent.

Source: *Value Line Investment Survey*, March 12, 2010.

SOUTH JERSEY GAS COMPANY

DCF Summary for
Gas Distribution Proxy Group

1. Dividend yield (October 2009 – March 2010)	4.28%[(1)]
2. Adjusted yield ((1) x 1.0275)	4.4%
3. Long-term Growth Rate	5.0 - 5.5
4. Total Return ((2) + (3))	9.4 - 9.9%
5. Flotation Adjustment (3)	0.0%
6. Cost of equity ((4) + (5))	9.4 - 9.9%
7. Midpoint cost of equity	9.7%
Recommendation	**10.0%**

(1) Schedule MIK-4, page 2 of 4.

(2) Schedule MIK-4, pages 3 and 4.

SOUTH JERSEY GAS COMPANY

Dividend Yields for Gas Distribution Proxy Group
(October 2009 – March 2010)

	Company	October	November	December	January	February	March	Average
1.	AGL Resources	4.8%	5.0%	4.7%	4.9%	4.8%	4.6%	4.80%
2.	Atmos	4.6	4.9	4.6	4.9	4.9	4.7	4.77
3.	LaClede	4.9	5.0	4.7	4.9	4.8	4.7	4.83
4.	NICOR	5.0	4.7	4.4	4.6	4.5	4.4	4.60
5.	Northwest Nat.	3.9	3.9	3.7	3.8	3.8	3.6	3.78
6.	Piedmont	4.6	4.6	4.0	4.2	4.3	4.1	4.30
7.	South Jersey	3.4	3.7	3.5	3.4	3.3	3.1	3.40
8.	Southwest Gas	3.8	3.6	3.3	3.4	3.5	3.3	3.48
9.	WGL	4.4	4.7	4.4	4.6	4.5	4.4	4.50
	Average	**4.38%**	**4.46%**	**4.14%**	**4.30%**	**4.27%**	**4.10%**	**4.28%**

Source: S&P *Stock Guide*, November 2009 – April 2010 issues.

SOUTH JERSEY GAS COMPANY

Projection of Earnings Per Share
Five-Year Growth Rates for the
Gas Distribution Proxy Group

	Company	Value Line	First Call	Zacks	CNN	Average
1.	AGL Resources	3.5%	5.75%	4.5%	7.0%	5.19%
2.	Atmos	5.5	4.2	5.0	5.0	4.93
3.	LaClede	2.5	3.5	3.0	--	3.00
4.	NICOR	2.5	4.3	3.7	3.5	3.50
5.	Northwest	5.0	5.5	5.7	5.5	5.43
6.	Piedmont	4.0	7.0	6.3	7.0	6.08
7.	South Jersey	5.5	11.67	11.6	8.5	9.32
8.	Southwest	8.0	3.3	7.0	6.0	6.08
9.	WGL	2.5	0.6	--	6.0	3.03
	Average	**4.33%**	**5.09%**	**5.85%**	**6.06%**	**5.17%**

Sources: *Value Line Investment Survey*, March 12, 2010. First Call is from Yahoo Finance website (April 2010) and Zacks is from MSN Money website (April 2010). In addition, the CNN figures are from the CNNfn web site (April 2010).

SOUTH JERSEY GAS COMPANY

Other Value Line Measure of
Growth for the Gas Distribution Proxy Group

	Company	Dividend Per Share	Book Value Per Share	Earnings Retention
1.	AGL Resources	2.5%	5.0%	5.0%
2.	Atmos	2.0	3.5	4.5
3.	LaClede	2.5	4.0	5.0
4.	NICOR	0.0	5.0	5.0
5.	Northwest	6.0	5.0	3.5
6.	Piedmont	3.5	3.0	5.0
7.	South Jersey	6.5	5.0	7.5
8.	Southwest	5.5	4.5	5.0
9.	WGL	2.5	4.0	4.0
	Average	**3.44%**	**4.33%**	**4.94%**

Source: *Value Line Investment Survey*, March 12, 2010. The earnings retention figures are projections for 2013-2015.

SOUTH JERSEY GAS COMPANY

DCF Summary for
Mr. Moul's Gas Distribution Utility Group

1. Dividend Yield (October 2009 – March 2010)	4.16%[1]
2. Adjusted Yield ((1) x 1.0325)	4.3%
3. Long-Term Growth Rate	5.5 - 6.0%
4. Total Return ((2) + (3))	9.8 - 10.3%
5. Flotation Adjustment (3)	0.0%
6. Cost of Equity ((4) + (5))	9.8 - 10.3%
7. Cost of Equity Midpoint	10.05%
Recommendation	**10.0%**

(1) Schedule MIK-5, page 2 of 4.

(2) Schedule MIK-5, pages 3 and 4.

SOUTH JERSEY GAS COMPANY

Dividend Yields for Gas Distribution Proxy Group
(October 2009 – March 2010)

	Company	October	November	December	January	February	March	Average
1.	AGL Resources	4.8%	5.0%	4.7%	4.9%	4.8%	4.6%	4.80%
2.	Atmos	4.6	4.9	4.6	4.9	4.9	4.7	4.77
3.	New Jersey Resources	3.5	3.5	3.6	3.7	3.7	3.6	3.60
4.	Northwest Nat.	3.9	3.9	3.7	3.8	3.8	3.6	3.78
5.	Piedmont	4.6	4.6	4.0	4.2	4.3	4.1	4.30
6.	South Jersey	3.4	3.7	3.5	3.4	3.3	3.1	3.40
7.	WGL	4.4	4.7	4.4	4.6	4.5	4.4	4.50
	Average	**4.17%**	**4.33%**	**4.07%**	**4.21%**	**4.19%**	**4.01%**	**4.16%**

Source: S&P *Stock Guide*, November 2009 – April 2010 issues.

SOUTH JERSEY GAS COMPANY

Projection of Earnings Per Share
Five-Year Growth Rates for Mr. Moul's
Gas Distribution Proxy Group

	Company	Value Line	First Call	Zacks	CNN	Average
1.	AGL Resources	3.5%	5.75%	4.5%	7.0%	5.19%
2.	Atmos	5.5	4.2	5.0	5.0	4.93
3.	New Jersey Resources	6.5	5.1	7.0	6.0	6.15
4.	Northwest	5.0	5.5	5.7	5.5	5.43
5.	Piedmont	4.0	7.0	6.3	7.0	6.08
6.	South Jersey	5.5	11.67	11.6	8.5	9.32
7.	WGL	2.5	0.6	--	6.0	3.03
	Average	**4.64%**	**5.69%**	**6.68%**	**6.43%**	**5.73%**

Sources: *Value Line Investment Survey*, March 12, 2010. First Call is from Yahoo Finance website (April 2010) and Zacks is from MSN Money website (April 2010). In addition, the CNN figures are from the CNNfn web site (April 2010).

SOUTH JERSEY GAS COMPANY

Other Value Line Measure of
Growth for Mr. Moul's Gas Distribution Proxy Group

	Company	Dividend Per Share	Book Value Per Share	Earnings Retention
1.	AGL Resources	2.5%	5.0%	5.0%
2.	Atmos	2.0	3.5	4.5
3.	New Jersey Resources	5.5	4.5	8.5
4.	Northwest	6.0	5.0	3.5
5.	Piedmont	3.5	3.0	5.0
6.	South Jersey	6.5	5.0	7.5
7.	WGL	2.5	4.0	4.0
	Average	**4.07%**	**4.29%**	**5.43%**

Source: *Value Line Investment Survey*, March 12, 2010. The earnings retention figures are projections for 2013-2015.

SOUTH JERSEY GAS COMPANY

Capital Asset Pricing Model Study
Illustrative Calculations

A. Model Specification

$K_e = R_F + \beta\ (R_m - R_F)$, where

K_e = cost of equity

R_F = return on risk free asset

Rm = expected stock market return

B. Data Inputs

R_F = 4.5% (Treasury bond yield for the most recent six months, see page 2 of 3)

Rm = 9.5 – 12.5% (equates to equity risk premium of 5.0 - 8.0%)

Beta = 0.67 (Source: page 3 of this schedule)

C. Model Calculations

Low end: K_e = 4.5% + 0.67 (5.0) = 7.9%

Midpoint: K_e = 4.5% + 0.67 (6.5) = 8.9%

Upper End: K_e = 4.5% + 0.67 (8.0) = 9.9%

SOUTH JERSEY GAS COMPANY

Long-Term Treasury Yields
(October 2009 – March 2010)

	10-Year	20-Year	30-Year
October 2009	3.4%	4.2%	4.2%
November	3.4	4.2	4.3
December	3.6	4.4	4.4
January 2010	3.7	4.5	4.7
February	3.7	4.5	4.6
March	3.7	4.5	4.6
Average	**3.6%**	**4.4%**	**4.5%**

Source: Federal Reserve *Statistical Release* (H.15), various issues.

SOUTH JERSEY GAS COMPANY

Beta Statistics for Proxy Gas Utility Companies

Company	Value Line	Yahoo Finance	MSN Money	Average
AGL Resources	0.75	0.46	0.43	0.55
Atmos	0.65	0.50	0.51	0.55
LaClede	0.60	0.06	0.03	0.23
NICOR	0.70	0.36	0.37	0.48
Northwest Natural	0.60	0.25	0.26	0.37
Piedmont	0.65	0.19	0.22	0.35
South Jersey	0.60	0.21	0.21	0.35
Southwest Gas	0.75	0.73	0.73	0.74
WGL	0.65	0.17	0.20	0.34
Average	**0.67**	**0.32**	**0.34**	**0.44**

Source: Schedule MIK-3 and Yahoo, MSN websites, April 2010.

APPENDIX A

QUALIFICATIONS OF

MATTHEW I. KAHAL

MATTHEW I. KAHAL

Mr. Kahal is currently an independent consulting economist, specializing in energy economics, public utility regulation and financial analysis. Over the past two decades, his work has encompassed electric utility integrated resource planning (IRP), power plant licensing and a wide range of utility financial issues. In the financial area he has conducted numerous cost of capital studies and addressed other financial issues for electric, gas, telephone and water utilities. Mr. Kahal's work in recent years has shifted to electric utility restructuring, mergers and competition.

Mr. Kahal has provided expert testimony on more than 300 occasions before state and federal regulatory commissions and the U.S. Congress. His testimony has covered need for power, integrated resource planning, cost of capital, purchased power practices and contracts, merger economics, industry restructuring and various other regulatory policy issues.

Education:

B.A. (Economics) - University of Maryland, 1971.

M.A. (Economics) - University of Maryland, 1974.

Ph.D. candidate - University of Maryland, completed all course work and qualifying examinations.

Previous Employment:

1981-2001 - Exeter Associates, Inc. (founding Principal).

1980-1981 - Member of the Economic Evaluation Directorate, The Aerospace Corporation, Washington, D.C. office.

1977-1980 - Economist, Washington, D.C. consulting firm.

1972-1977 - Research/Teaching Assistant and Instructor, Department of Economics, University of Maryland (College Park).

1975-1977 - Lecturer in Business/Economics, Montgomery College.

Professional Work Experience:

Mr. Kahal has more than twenty years experience managing and conducting consulting assignments relating to public utility economics and regulation. In 1981, he and five colleagues founded the firm of Exeter Associates, Inc. and for the next 20 years he served as a Principal and corporate officer in the firm. During that time, he supervised multi-million dollar support contracts with the State of Maryland and directed the technical work conducted both by Exeter professional staff and numerous subcontractors. Additionally, Mr. Kahal took the lead role at Exeter in consulting to the firm's other governmental and private clients in the areas of financial analysis, utility mergers, electric restructuring and utility purchase power contracts.

At the Aerospace Corporation, Mr. Kahal served as an economic consultant to the Strategic Petroleum Reserve (SPR). In that capacity he participated in a detailed financial assessment of the SPR, and developed an econometric forecasting model of U.S. petroleum industry inventories. That study has been used to determine the extent to which private sector petroleum stocks can be expected to protect the U.S. from the impacts of oil import interruptions.

Before entering consulting, Mr. Kahal held faculty positions with the Department of Economics at the University of Maryland and with Montgomery College teaching courses on economic principles, business and economic development.

Publications and Consulting Reports:

Projected Electric Power Demands of the Baltimore Gas and Electric Company, Maryland Power Plant Siting Program, 1979.

Projected Electric Power Demands of the Allegheny Power System, Maryland Power Plant Siting Program, January 1980.

An Econometric Forecast of Electric Energy and Peak Demand on the Delmarva Peninsula, Maryland Power Plant Siting Program, March 1980 (with Ralph E. Miller).

A Benefit/Cost Methodology of the Marginal Cost Pricing of Tennessee Valley Authority Electricity, prepared for the Board of Directors of the Tennessee Valley Authority, April 1980.

An Evaluation of the Delmarva Power and Light Company Generating Capacity Profile and Expansion Plan, (Interim Report), prepared for the Delaware Office of the Public Advocate, July 1980, (with Sharon L. Mason).

Rhode Island-DOE Electric Utilities Demonstration Project, Third Interim Report on Preliminary Analysis of the Experimental Results, prepared for the Economic Regulatory Administration, U.S. Department of Energy, July 1980.

Petroleum Inventories and the Strategic Petroleum Reserve, The Aerospace Corporation, prepared for the Strategic Petroleum Reserve Office, U.S. Department of Energy, December 1980.

Alternatives to Central Station Coal and Nuclear Power Generation, prepared for Argonne National Laboratory and the Office of Utility Systems, U.S. Department of Energy, August 1981.

"An Econometric Methodology for Forecasting Power Demands," Conducting Need-for-Power Review for Nuclear Power Plants (D.A. Nash, ed.), U.S. Nuclear Regulatory Commission, NUREG-0942, December 1982.

State Regulatory Attitudes Toward Fuel Expense Issues, prepared for the Electric Power Research Institute, July 1983, (with Dale E. Swan).

"Problems in the Use of Econometric Methods in Load Forecasting," Adjusting to Regulatory, Pricing and Marketing Realities (Harry Trebing, ed.), Institute of Public Utilities, Michigan State University, 1983.

Proceedings of the Maryland Conference on Electric Load Forecasting, (editor and contributing author), Maryland Power Plant Siting Program, PPES-83-4, October 1983.

"The Impacts of Utility-Sponsored Weatherization Programs: The Case of Maryland Utilities," (with others), in Government and Energy Policy (Richard L. Itteilag, ed.), 1983.

Power Plant Cumulative Environmental Impact Report, contributing author, (Paul E. Miller, ed.) Maryland Department of Natural Resources, January 1984.

Projected Electric Power Demands for the Potomac Electric Power Company, three volumes with Steven L. Estomin), prepared for the Maryland Power Plant Siting Program, March 1984.

"An Assessment of the State-of-the-Art of Gas Utility Load Forecasting," (with Thomas Bacon, Jr. and Steven L. Estomin), published in the Proceedings of the Fourth NARUC Biennial Regulatory Information Conference, 1984.

"Nuclear Power and Investor Perceptions of Risk," (with Ralph E. Miller), published in The Energy Industries in Transition: 1985-2000 (John P. Weyant and Dorothy Sheffield, eds.), 1984.

The Financial Impact of Potential Department of Energy Rate Recommendations on the Commonwealth Edison Company, prepared for the U.S. Department of Energy, October 1984.

"Discussion Comments," published in Impact of Deregulation and Market Forces on Public Utilities: The Future of Regulation (Harry Trebing, ed.), Institute of Public Utilities, Michigan State University, 1985.

An Econometric Forecast of the Electric Power Loads of Baltimore Gas and Electric Company, two volumes (with others), prepared for the Maryland Power Plant Siting Program, 1985.

A Survey and Evaluation of Demand Forecast Methods in the Gas Utility Industry, prepared for the Public Utilities Commission of Ohio, Forecasting Division, November 1985, (with Terence Manuel).

A Review and Evaluation of the Load Forecasts of Houston Lighting & Power Company and Central Power & Light Company -- Past and Present, prepared for the Texas Public Utility Commission, December 1985, (with Marvin H. Kahn).

Power Plant Cumulative Environmental Impact Report for Maryland, principal author of three of the eight chapters in the report (Paul E. Miller, ed.), PPSP-CEIR-5, March 1986.

"Potential Emissions Reduction from Conservation, Load Management, and Alternative Power," published in Acid Deposition in Maryland: A Report to the Governor and General Assembly, Maryland Power Plant Research Program, AD-87-1, January 1987.

Determination of Retrofit Costs at the Oyster Creek Nuclear Generating Station, March 1988, prepared for Versar, Inc., New Jersey Department of Environmental Protection.

Excess Deferred Taxes and the Telephone Utility Industry, April 1988, prepared on behalf of the National Association of State Utility Consumer Advocates.

Toward a Proposed Federal Policy for Independent Power Producers, comments prepared on behalf of the Indiana Consumer Counselor, FERC Docket EL87-67-000, November 1987.

Review and Discussion of Regulations Governing Bidding Programs, prepared for the Pennsylvania Office of Consumer Advocate, June 1988.

A Review of the Proposed Revisions to the FERC Administrative Rules on Avoided Costs and Related Issues, prepared for the Pennsylvania Office of Consumer Advocate, April 1988.

Review and Comments on the FERC NOPR Concerning Independent Power Producers, prepared for the Pennsylvania Office of Consumer Advocate, June 1988.

The Costs to Maryland Utilities and Ratepayers of an Acid Rain Control Strategy -- An Updated Analysis, prepared for the Maryland Power Plant Research Program, October 1987, AD-88-4.

"Comments," in New Regulatory and Management Strategies in a Changing Market Environment (Harry M. Trebing and Patrick C. Mann, editors), Proceedings of the Institute of Public Utilities Eighteenth Annual Conference, 1987.

Electric Power Resource Planning for the Potomac Electric Power Company, prepared for the Maryland Power Plant Research Program, July 1988.

Power Plant Cumulative Environmental Impact Report for Maryland (Thomas E. Magette, ed.) authored two chapters, November 1988, PPRP-CEIR-6.

Resource Planning and Competitive Bidding for Delmarva Power & Light Company, October 1990, prepared for the Maryland Department of Natural Resources (with M. Fullenbaum).

Electric Power Rate Increases and the Cleveland Area Economy, prepared for the Northeast Ohio Areawide Coordinating Agency, October 1988.

An Economic and Need for Power Evaluation of Baltimore Gas & Electric Company's Perryman Plant, May 1991, prepared for the Maryland Department of Natural Resources (with M. Fullenbaum).

The Cost of Equity Capital for the Bell Local Exchange Companies in a New Era of Regulation, October 1991, presented at the Atlantic Economic Society 32nd Conference, Washington, D.C.

A Need for Power Review of Delmarva Power & Light Company's Dorchester Unit 1 Power Plant, March 1993, prepared for the Maryland Department of National Resources (with M. Fullenbaum)

The AES Warrior Run Project: Impact on Western Maryland Economic Activity and Electric Rates, February 1993, prepared for the Maryland Power Plant Research Program (with Peter Hall).

An Economic Perspective on Competition and the Electric Utility Industry, November 1994. Prepared for the Electric Consumers' Alliance.

PEPCO's Clean Air Act Compliance Plan: Status Report, prepared for the Maryland Power Plant Research Plan, January 1995 (w/Diane Mountain, Environmental Resources Management, Inc.).

The FERC Open Access Rulemaking: A Review of the Issues, prepared for the Indiana Office of Utility Consumer Counselor and the Pennsylvania Office of Consumer Advocate, June 1995.

A Status Report on Electric Utility Restructuring: Issues for Maryland, prepared for the Maryland Power Plant Research Program, November 1995 (with Daphne Psacharopoulos).

Modeling the Financial Impacts on the Bell Regional Holding Companies from Changes in Access Rates, prepared for MCI Corporation, May 1996.

The CSEF Electric Deregulation Study: Economic Miracle or the Economists' Cold Fusion?, prepared for the Electric Consumers' Alliance, Indianapolis, Indiana, October 1996.

Reducing Rates for Interstate Access Service: Financial Impacts on the Bell Regional Holding Companies, prepared for MCI Corporation, May 1997.

The New Hampshire Retail Competition Pilot Program: A Preliminary Evaluation, July 1997, prepared for the Electric Consumers' Alliance (with Jerome D. Mierzwa).

Electric Restructuring and the Environment: Issue Identification for Maryland, March 1997, prepared for the Maryland Power Plant Research Program (with Environmental Resource Management, Inc.)

An Analysis of Electric Utility Embedded Power Supply Costs, prepared for Power-Gen International Conference, Dallas, Texas, December 1997.

Market Power Outlook for Generation Supply in Louisiana, December 2000, prepared for the Louisiana Public Service Commission (with others).

A Review of Issues Concerning Electric Power Capacity Markets, prepared for the Maryland Power Plant Research Program, December 2001 (with B. Hobbs and J. Inon).
The Economic Feasibility of Air Emissions Controls at the Brandon Shores and Morgantown Coal-fired Power Plants, February 2005, (prepared for the Chesapeake Bay Foundation).

The Economic Feasibility of Power Plant Retirements on the Entergy System, September 2005 with Phil Hayet (prepared for the Louisiana Public Service Commission).

Expert Report on Capital Structure, Equity and Debt Costs, prepared for the Edmonton Regional Water Customers Group, August 30, 2006.

Maryland's Options to Reduce and Stabilize Electric Power Prices Following Restructuring, with Steven L. Estomin, prepared for the Power Plant Research Program, Maryland Department of Natural Resources, September 2006.

Expert Report of Matthew I. Kahal, on behalf of the U. S. Department of Justice, August 2008, Civil Action No. IP-99-1693C-MIS.

Conference and Workshop Presentations:

Workshop on State Load Forecasting Programs, sponsored by the Nuclear Regulatory Commission and Oak Ridge National Laboratory, February 1982 (presentation on forecasting methodology).

Fourteenth Annual Conference of the Michigan State University Institute for Public Utilities, December 1982 (presentation on problems in forecasting).

Conference on Conservation and Load Management, sponsored by the Massachusetts Energy Facilities Siting Council, May 1983 (presentation on cost-benefit criteria).

Maryland Conference on Load Forecasting, sponsored by the Maryland Power Plant Siting Program and the Maryland Public Service Commission, June 1983 (presentation on overforecasting power demands).

The 5th Annual Meetings of the International Association of Energy Economists, June 1983 (presentation on evaluating weatherization programs).

The NARUC Advanced Regulatory Studies Program (presented lectures on capacity planning for electric utilities), February 1984.

The 16th Annual Conference of the Institute of Public Utilities, Michigan State University (discussant on phase-in and excess capacity), December 1984.

U.S. Department of Energy Utilities Conference, Las Vegas, Nevada (presentation of current and future regulatory issues), May 1985.

The 18th Annual Conference of the Institute of Public Utilities, Michigan State University, Williamsburg, Virginia, December 1986 (discussant on cogeneration).

The NRECA Conference on Load Forecasting, sponsored by the National Rural Electric Cooperative Association, New Orleans, Louisiana, December 1987 (presentation on load forecast accuracy).

The Second Rutgers/New Jersey Department of Commerce Annual Conference on Energy Policy in the Middle Atlantic States, Rutgers University, April 1988 (presentation on spot pricing of electricity).

The NASUCA 1988 Mid-Year Meeting, Annapolis, Maryland, June 1988, sponsored by the National Association of State Utility Consumer Advocates (presentation on the FERC electricity avoided cost NOPRs).

The Thirty Second Atlantic Economic Society Conference, Washington, D.C., October 1991 (presentation of a paper on cost of capital issues for the Bell Operating Companies).

The NASUCA 1993 Mid-Year Meeting, St. Louis, Missouri, sponsored by the National Association of State Utility Consumer Advocates, June 1993 (presentation on regulatory issues concerning electric utility mergers).

The NASUCA and NARUC annual meetings in New York City, November 1993 (presentations and panel discussions on the emerging FERC policies on transmission pricing).

The NASUCA annual meetings in Reno, Nevada, November 1994 (presentation concerning the FERC NOPR on stranded cost recovery).

U.S. Department of Energy Utilities/Energy Management Workshop, March 1995 (presentation concerning electric utility competition).

The 1995 NASUCA Mid-Year Meeting, Breckenridge, Colorado, June 1995, (presentation concerning the FERC rulemaking on electric transmission open access).

The 1996 NASUCA Mid-Year Meeting, Chicago, Illinois, June 1996 (presentation concerning electric utility merger issues).

Conference on "Restructuring the Electric Industry," sponsored by the National Consumers League and Electric Consumers Alliance, Washington, D.C., May 1997 (presentation on retail access pilot programs).

The 1997 Mid-Atlantic Conference of Regulatory Utilities Commissioners (MARUC), Hot Springs, Virginia, July 1997 (presentation concerning electric deregulation issues).

Power-Gen '97 International Conference, Dallas, Texas, December 1997 (presentation concerning utility embedded costs of generation supply).

Consumer Summit on Electric Competition, sponsored by the National Consumers League and Electric Consumers' Alliance, Washington, D.C., March 2001 (presentation concerning generation supply and reliability).

National Association of State Utility Consumer Advocates, Mid-Year Meetings, Austin, Texas, June 16-17, 2002 (presenter and panelist on RTO/Standard Market Design issues).

Louisiana State Bar Association, Public Utility Section, October 2, 2002. (Presentation on Performance-Based Ratemaking and panelist on RTO issues). Baton Rouge, Louisiana.

Virginia State Corporation Commission/Virginia State Bar, Twenty Second National Regulatory Conference, May 10, 2004. (Presentation on Electric Transmission System Planning.) Williamsburg, Virginia.

Expert Testimony
of Matthew I. Kahal

	Docket Number	Utility	Jurisdiction	Client	Subject
1.	27374 & 27375 October 1978	Long Island Lighting Company	New York Counties	Nassau & Suffolk	Economic Impacts of Proposed Rate Increase
2.	6807 January 1978	Generic	Maryland	MD Power Plant Siting Program	Load Forecasting
3.	78-676-EL-AIR February 1978	Ohio Power Company	Ohio	Ohio Consumers' Counsel	Test Year Sales and Revenues
4.	17667 May 1979	Alabama Power Company	Alabama	Attorney General	Test Year Sales, Revenues, Costs and Load Forecasts
5.	None April 1980	Tennessee Valley Authority	TVA Board	League of Women Voters	Time-of-Use Pricing
6.	R-80021082	West Penn Power Company	Pennsylvania	Office of Consumer Advocate	Load Forecasting, Marginal Cost pricing
7.	7259 (Phase I) October 1980	Potomac Edison Company	Maryland	MD Power Plant Siting Program	Load Forecasting
8.	7222 December 1980	Delmarva Power & Light Company	Maryland	MD Power Plant Siting Program	Need for Plant, Load Forecasting
9.	7441 June 1981	Potomac Electric Power Company	Maryland	Commission Staff	PURPA Standards
10.	7159 May 1980	Baltimore Gas & Electric	Maryland	Commission Staff	Time-of-Use Pricing
11.	81-044-E-42T	Monongahela Power	West Virginia	Commission Staff	Time-of-Use Rates
12.	7259 (Phase II) November 1981	Potomac Edison Company	Maryland	MD Power Plant Siting Program	Load Forecasting, Load Management
13.	1606 September 1981	Blackstone Valley Electric and Narragansett	Rhode Island	Division of Public Utilities	PURPA Standards
14.	RID 1819 April 1982	Pennsylvania Bell	Pennsylvania	Office of Consumer Advocate	Rate of Return
15.	82-0152 July 1982	Illinois Power Company	Illinois	U.S. Department of Defense	Rate of Return, CWIP

Expert Testimony
of Matthew I. Kahal

	Docket Number	Utility	Jurisdiction	Client	Subject
16.	7559 September 1982	Potomac Edison Company	Maryland	Commission Staff	Cogeneration
17.	820150-EU September 1982	Gulf Power Company	Florida	Federal Executive Agencies	Rate of Return, CWIP
18.	82-057-15 January 1983	Mountain Fuel Supply Company	Utah	Federal Executive Agencies	Rate of Return, Capital Structure
19.	5200 August 1983	Texas Electric Service Company	Texas	Federal Executive Agencies	Cost of Equity
20.	28069 August 1983	Oklahoma Natural Gas	Oklahoma	Federal Executive Agencies	Rate of Return, deferred taxes, capital structure, attrition
21.	83-0537 February 1984	Commonwealth Edison Company	Illinois	U.S. Department of Energy	Rate of Return, capital structure, financial capability
22.	84-035-01 June 1984	Utah Power & Light Company	Utah	Federal Executive Agencies	Rate of Return
23.	U-1009-137 July 1984	Utah Power & Light Company	Idaho	U.S. Department of Energy	Rate of Return, financial condition
24.	R-842590 August 1984	Philadelphia Electric Company	Pennsylvania	Office of Consumer Advocate	Rate of Return
25.	840086-EI August 1984	Gulf Power Company	Florida	Federal Executive Agencies	Rate of Return, CWIP
26.	84-122-E August 1984	Carolina Power & Light Company	South Carolina	South Carolina Consumer Advocate	Rate of Return, CWIP, load forecasting
27.	CGC-83-G & CGC-84-G October 1984	Columbia Gas of Ohio	Ohio	Ohio Division of Energy	Load forecasting
28.	R-842621 October 1984	Western Pennsylvania Water Company	Pennsylvania	Office of Consumer Advocate	Test year sales
29.	R-842710 January 1985	ALLTEL Pennsylvania Inc.	Pennsylvania	Office of Consumer Advocate	Rate of Return
30.	ER-504 February 1985	Allegheny Generating Company	FERC	Office of Consumer Advocate	Rate of Return

Expert Testimony
of Matthew I. Kahal

	Docket Number	Utility	Jurisdiction	Client	Subject
31.	R-842632 March 1985	West Penn Power Company	Pennsylvania	Office of Consumer Advocate	Rate of Return, conservation, time-of-use rates
32.	83-0537 & 84-0555 April 1985	Commonwealth Edison Company	Illinois	U.S. Department of Energy	Rate of Return, incentive rates, rate base
33.	Rulemaking Docket No. 11, May 1985	Generic	Delaware	Delaware Commission Staff	Interest rates on refunds
34.	29450 July 1985	Oklahoma Gas & Electric Company	Oklahoma	Oklahoma Attorney General	Rate of Return, CWIP in rate base
35.	1811 August 1985	Bristol County Water Company	Rhode Island	Division of Public Utilities	Rate of Return, capital Structure
36.	R-850044 & R-850045 August 1985	Quaker State & Continental Telephone Companies	Pennsylvania	Office of Consumer Advocate	Rate of Return
37.	R-850174 November 1985	Philadelphia Suburban Water Company	Pennsylvania	Office of Consumer Advocate	Rate of Return, financial conditions
38.	U-1006-265 March 1986	Idaho Power Company	Idaho	U.S. Department of Energy	Power supply costs and models
39.	EL-86-37 & EL-86-38 September 1986	Allegheny Generating Company	FERC	PA Office of Consumer Advocate	Rate of Return
40.	R-850287 June 1986	National Fuel Gas Distribution Corp.	Pennsylvania	Office of Consumer Advocate	Rate of Return
41.	1849 August 1986	Blackstone Valley Electric	Rhode Island	Division of Public Utilities	Rate of Return, financial condition
42.	86-297-GA-AIR November 1986	East Ohio Gas Company	Ohio	Ohio Consumers' Counsel	Rate of Return
43.	U-16945 December 1986	Louisiana Power & Light Company	Louisiana	Public Service Commission	Rate of Return, rate phase-in plan
44.	Case No. 7972 February 1987	Potomac Electric Power Company	Maryland	Commission Staff	Generation capacity planning, purchased power contract
45.	EL-86-58 & EL-86-59 March 1987	System Energy Resources and Middle South Services	FERC	Louisiana PSC	Rate of Return

Expert Testimony
of Matthew I. Kahal

	Docket Number	Utility	Jurisdiction	Client	Subject
46.	ER-87-72-001 April 1987	Orange & Rockland	FERC	PA Office of Consumer Advocate	Rate of Return
47.	U-16945 April 1987	Louisiana Power & Light Company	Louisiana	Commission Staff	Revenue requirement update phase-in plan
48.	P-870196 May 1987	Pennsylvania Electric Company	Pennsylvania	Office of Consumer Advocate	Cogeneration contract
49.	86-2025-EL-AIR June 1987	Cleveland Electric Illuminating Company	Ohio	Ohio Consumers' Counsel	Rate of Return
50.	86-2026-EL-AIR June 1987	Toledo Edison Company	Ohio	Ohio Consumers' Counsel	Rate of Return
51.	87-4 June 1987	Delmarva Power & Light Company	Delaware	Commission Staff	Cogeneration/small power
52.	1872 July 1987	Newport Electric Company	Rhode Island	Commission Staff	Rate of Return
53.	WO 8606654 July 1987	Atlantic City Sewerage Company	New Jersey	Resorts International	Financial condition
54.	7510 August 1987	West Texas Utilities Company	Texas	Federal Executive Agencies	Rate of Return, phase-in
55.	8063 Phase I October 1987	Potomac Electric Power Company	Maryland	Power Plant Research Program	Economics of power plant site selection
56.	00439 November 1987	Oklahoma Gas & Electric Company	Oklahoma	Smith Cogeneration	Cogeneration economics
57.	RP-87-103 February 1988	Panhandle Eastern Pipe Line Company	FERC	Indiana Utility Consumer Counselor	Rate of Return
58.	EC-88-2-000 February 1988	Utah Power & Light Co. PacifiCorp	FERC	Nucor Steel	Merger economics
59.	87-0427 February 1988	Commonwealth Edison Company	Illinois	Federal Executive Agencies	Financial projections
60.	870840 February 1988	Philadelphia Suburban Water Company	Pennsylvania	Office of Consumer Advocate	Rate of Return

Expert Testimony
of Matthew I. Kahal

	Docket Number	Utility	Jurisdiction	Client	Subject
75.	89-0033 May 1989	Illinois Bell Telephone Company	Illinois	Citizens Utility Board	Rate of Return
76.	881167-EI May 1989	Gulf Power Company	Florida	Federal Executive Agencies	Rate of Return
77.	R-891218 July 1989	National Fuel Gas Distribution Company	Pennsylvania	Office of Consumer Advocate	Sales forecasting
78.	8063, Phase III Sept. 1989	Potomac Electric Power Company	Maryland	Depart. Natural Resources	Emissions Controls
79.	37414-S2 October 1989	Public Service Company of Indiana	Indiana	Utility Consumer Counselor	Rate of Return, DSM, off-system sales, incentive regulation
80.	October 1989	Generic	U.S. House of Reps. Comm. on Ways & Means	NA	Excess deferred income tax
81.	38728 November 1989	Indiana Michigan Power Company	Indiana	Utility Consumer Counselor	Rate of Return
82.	RP89-49-000 December 1989	National Fuel Gas Supply Corporation	FERC	PA Office of Consumer Advocate	Rate of Return
83.	R-891364 December 1989	Philadelphia Electric Company	Pennsylvania	PA Office of Consumer Advocate	Financial impacts (surrebuttal only)
84.	RP89-160-000 January 1990	Trunkline Gas Company	FERC	Indiana Utility Consumer Counselor	Rate of Return
85.	EL90-16-000 November 1990	System Energy Resources, Inc.	FERC	Louisiana Public Service Commission	Rate of Return
86.	89-624 March 1990	Bell Atlantic	FCC	PA Office of Consumer Advocate	Rate of Return
87.	8245 March 1990	Potomac Edison Company	Maryland	Depart. Natural Resources	Avoided Cost
88.	000586 March 1990	Public Service Company of Oklahoma	Oklahoma	Smith Cogeneration Mgmt.	Need for Power

<u>Expert Testimony</u>
<u>of Matthew I. Kahal</u>

	Docket Number	Utility	Jurisdiction	Client	Subject
89.	38868 March 1990	Indianapolis Water Company	Indiana	Utility Consumer Counselor	Rate of Return
90.	1946 March 1990	Blackstone Valley Electric Company	Rhode Island	Division of Public Utilities	Rate of Return
91.	000776 April 1990	Oklahoma Gas & Electric Company	Oklahoma	Smith Cogeneration Mgmt.	Need for Power
92.	890366 May 1990, December 1990	Metropolitan Edison Company	Pennsylvania	Office of Consumer Advocate	Competitive Bidding Program Avoided Costs
93.	EC-90-10-000 May 1990	Northeast Utilities	FERC	Maine PUC, et. al.	Merger, Market Power, Transmission Access
94.	ER-891109125 July 1990	Jersey Central Power & Light	New Jersey	Rate Counsel	Rate of Return
95.	R-901670 July 1990	National Fuel Gas Distribution Corp.	Pennsylvania	Office of Consumer Advocate	Rate of Return Test year sales
96.	8201 October 1990	Delmarva Power & Light Company	Maryland	Depart. Natural Resources	Competitive Bidding, Resource Planning
97.	EL90-45-000 April 1991	Entergy Services, Inc.	FERC	Louisiana PSC	Rate of Return
98.	GR90080786J January 1991	New Jersey Natural Gas	New Jersey	Rate Counsel	Rate of Return
99.	90-256 January 1991	South Central Bell Telephone Company	Kentucky	Attorney General	Rate of Return
100.	U-17949A February 1991	South Central Bell Telephone Company	Louisiana	Louisiana PSC	Rate of Return
101.	ER90091090J April 1991	Atlantic City Electric Company	New Jersey	Rate Counsel	Rate of Return
102.	8241, Phase I April 1991	Baltimore Gas & Electric Company	Maryland	Dept. of Natural Resources	Environmental controls

Expert Testimony
of Matthew I. Kahal

	Docket Number	Utility	Jurisdiction	Client	Subject
103.	8241, Phase II May 1991	Baltimore Gas & Electric Company	Maryland	Dept. of Natural Resources	Need for Power, Resource Planning
104.	39128 May 1991	Indianapolis Water Company	Indiana	Utility Consumer Counselor	Rate of Return, rate base, financial planning
105.	P-900485 May 1991	Duquesne Light Company	Pennsylvania	Office of Consumer Advocate	Purchased power contract and related ratemaking
106.	G900240 P910502 May 1991	Metropolitan Edison Company Pennsylvania Electric Company	Pennsylvania	Office of Consumer Advocate	Purchased power contract and related ratemaking
107.	GR901213915 May 1991	Elizabethtown Gas Company	New Jersey	Rate Counsel	Rate of Return
108.	91-5032 August 1991	Nevada Power Company	Nevada	U.S. Dept. of Energy	Rate of Return
109.	EL90-48-000 November 1991	Entergy Services	FERC	Louisiana PSC	Capacity transfer
110.	000662 September 1991	Southwestern Bell Telephone	Oklahoma	Attorney General	Rate of Return
111.	U-19236 October 1991	Arkansas Louisiana Gas Company	Louisiana	Louisiana PSC Staff	Rate of Return
112.	U-19237 December 1991	Louisiana Gas Service Company	Louisiana	Louisiana PSC Staff	Rate of Return
113.	ER91030356J October 1991	Rockland Electric Company	New Jersey	Rate Counsel	Rate of Return
114.	GR91071243J February 1992	South Jersey Gas Company	New Jersey	Rate Counsel	Rate of Return
115.	GR91081393J March 1992	New Jersey Natural Gas Company	New Jersey	Rate Counsel	Rate of Return
116.	P-870235 et al. March 1992	Pennsylvania Electric Company	Pennsylvania	Office of Consumer Advocate	Cogeneration contracts

Expert Testimony
of Matthew I. Kahal

	Docket Number	Utility	Jurisdiction	Client	Subject
117.	8413 March 1992	Potomac Electric Power Company	Maryland	Dept. of Natural Resources	IPP purchased power contracts
118.	39236 March 1992	Indianapolis Power & Light Company	Indiana	Utility Consumer Counselor	Least-cost planning Need for power
119.	R-912164 April 1992	Equitable Gas Company	Pennsylvania	Office of Consumer Advocate	Rate of Return
120.	ER-91111698J May 1992	Public Service Electric & Gas Company	New Jersey	Rate Counsel	Rate of Return
121.	U-19631 June 1992	Trans Louisiana Gas Company	Louisiana	PSC Staff	Rate of Return
122.	ER-91121820J July 1992	Jersey Central Power & Light Company	New Jersey	Rate Counsel	Rate of Return
123.	R-00922314 August 1992	Metropolitan Edison Company	Pennsylvania	Office of Consumer Advocate	Rate of Return
124.	92-049-05 September 1992	US West Communications	Utah	Committee of Consumer Services	Rate of Return
125.	92PUE0037 September 1992	Commonwealth Gas Company	Virginia	Attorney General	Rate of Return
126.	EC92-21-000 September 1992	Entergy Services, Inc.	FERC	Louisiana PSC	Merger Impacts (Affidavit)
127.	ER92-341-000 December 1992	System Energy Resources	FERC	Louisiana PSC	Rate of Return
128.	U-19904 November 1992	Louisiana Power & Light Company	Louisiana	Staff	Merger analysis, competition competition issues
129.	8473 November 1992	Baltimore Gas & Electric Company	Maryland	Dept. of Natural Resources	QF contract evaluation
130.	IPC-E-92-25 January 1993	Idaho Power Company	Idaho	Federal Executive Agencies	Power Supply Clause

Expert Testimony
of Matthew I. Kahal

	Docket Number	Utility	Jurisdiction	Client	Subject
131.	E002/GR-92-1185 February 1993	Northern States Power Company	Minnesota	Attorney General	Rate of Return
132.	92-102, Phase II March 1992	Central Maine Power Company	Maine	Staff	QF contracts prudence and procurements practices
133.	EC92-21-000 March 1993	Entergy Corporation	FERC	Louisiana PSC	Merger Issues
134.	8489 March 1993	Delmarva Power & Light Company	Maryland	Dept. of Natural Resources	Power Plant Certification
135.	11735 April 1993	Texas Electric Utilities Company	Texas	Federal Executives Agencies	Rate of Return
136.	2082 May 1993	Providence Gas Company	Rhode Island	Division of Public Utilities	Rate of Return
137.	P-00930715 December 1993	Bell Telephone Company of Pennsylvania	Pennsylvania	Office of Consumer Advocate	Rate of Return, Financial Projections, Bell/TCI merger
138.	R-00932670 February 1994	Pennsylvania-American Water Company	Pennsylvania	Office of Consumer Advocate	Rate of Return
139.	8583 February 1994	Conowingo Power Company	Maryland	Dept. of Natural Resources	Competitive Bidding for Power Supplies
140.	E-015/GR-94-001 April 1994	Minnesota Power & Light Company	Minnesota	Attorney General	Rate of Return
141.	CC Docket No. 94-1 May 1994	Generic Telephone	FCC	MCI Comm. Corp.	Rate of Return
142.	92-345, Phase II June 1994	Central Maine Power Company	Maine	Advocacy Staff	Price Cap Regulation Fuel Costs
143.	93-11065 April 1994	Nevada Power Company	Nevada	Federal Executive Agencies	Rate of Return
144.	94-0065 May 1994	Commonwealth Edison Company	Illinois	Federal Executive Agencies	Rate of Return
145.	GR94010002J June 1994	South Jersey Gas Company	New Jersey	Rate Counsel	Rate of Return

Expert Testimony
of Matthew I. Kahal

	Docket Number	Utility	Jurisdiction	Client	Subject
146.	WR94030059 July 1994	New Jersey-American Water Company	New Jersey	Rate Counsel	Rate of Return
147.	RP91-203-000 June 1994	Tennessee Gas Pipeline Company	FERC	Customer Group	Environmental Externalities (oral testimony only)
148.	ER94-998-000 July 1994	Ocean State Power	FERC	Boston Edison Company	Rate of Return
149.	R-00942986 July 1994	West Penn Power Company	Pennsylvania	Office of Consumer Advocate	Rate of Return, Emission Allowances
150.	94-121 August 1994	South Central Bell Telephone Company	Kentucky	Attorney General	Rate of Return
151.	35854-S2 November 1994	PSI Energy, Inc.	Indiana	Utility Consumer Counsel	Merger Savings and Allocations
152.	IPC-E-94-5 November 1994	Idaho Power Company	Idaho	Federal Executive Agencies	Rate of Return
153.	November 1994	Edmonton Water	Alberta, Canada	Regional Customer Group	Rate of Return (Rebuttal Only)
154.	90-256 December 1994	South Central Bell Telephone Company	Kentucky	Attorney General	Incentive Plan True-Ups
155.	U-20925 February 1995	Louisiana Power & Light Company	Louisiana	PSC Staff	Rate of Return Industrial Contracts Trust Fund Earnings
156.	R-00943231 February 1995	Pennsylvania-American Water Company	Pennsylvania	Consumer Advocate	Rate of Return
157.	8678 March 1995	Generic	Maryland	Dept. Natural Resources	Electric Competition Incentive Regulation (oral only)
158.	R-000943271 April 1995	Pennsylvania Power & Light Company	Pennsylvania	Consumer Advocate	Rate of Return Nuclear decommissioning Capacity Issues
159.	U-20925 May 1995	Louisiana Power & Light Company	Louisiana	Commission Staff	Class Cost of Service Issues

	Docket Number	Utility	Jurisdiction	Client	Subject
160.	2290 June 1995	Narragansett Electric Company	Rhode Island	Division Staff	Rate of Return
161.	U-17949E June 1995	South Central Bell Telephone Company	Louisiana	Commission Staff	Rate of Return
162.	2304 July 1995	Providence Water Supply Board	Rhode Island	Division Staff	Cost recovery of Capital Spending Program
163.	ER95-625-000 et al. August 1995	PSI Energy, Inc.	FERC	Office of Utility Consumer Counselor	Rate of Return
164.	P-00950915 et al. September 1995	Paxton Creek Cogeneration Assoc.	Pennsylvania	Office of Consumer Advocate	Cogeneration Contract Amendment
165.	8702 September 1995	Potomac Edison Company	Maryland	Dept. of Natural Resources	Allocation of DSM Costs (oral only)
166.	ER95-533-001 September 1995	Ocean State Power	FERC	Boston Edison Co.	Cost of Equity
167.	40003 November 1995	PSI Energy, Inc.	Indiana	Utility Consumer Counselor	Rate of Return Retail wheeling
168.	P-55, SUB 1013 January 1996	BellSouth	North Carolina	AT&T	Rate of Return
169.	P-7, SUB 825 January 1996	Carolina Tel.	North Carolina	AT&T	Rate of Return
170.	February 1996	Generic Telephone	FCC	MCI	Cost of capital
171.	95A-531EG April 1996	Public Service Company of Colorado	Colorado	Federal Executive Agencies	Merger issues
172.	ER96-399-000 May 1996	Northern Indiana Public Service Company	FERC	Indiana Office of Utility Consumer Counselor	Cost of capital
173.	8716 June 1996	Delmarva Power & Light Company	Maryland	Dept. of Natural Resources	DSM programs
174.	8725 July 1996	BGE/PEPCO	Maryland	Md. Energy Admin.	Merger Issues

Expert Testimony
of Matthew I. Kahal

	Docket Number	Utility	Jurisdiction	Client	Subject
175.	U-20925 August 1996	Entergy Louisiana, Inc.	Louisiana	PSC Staff	Rate of Return Allocations Fuel Clause
176.	EC96-10-000 September 1996	BGE/PEPCO	FERC	Md. Energy Admin.	Merger issues competition
177.	EL95-53-000 November 1996	Entergy Services, Inc.	FERC	Louisiana PSC	Nuclear Decommissioning
178.	WR96100768 March 1997	Consumers NJ Water Company	New Jersey	Ratepayer Advocate	Cost of Capital
179.	WR96110818 April 1997	Middlesex Water Co.	New Jersey	Ratepayer Advocate	Cost of Capital
180.	U-11366 April 1997	Ameritech Michigan	Michigan	MCI	Access charge reform/financial condition
181.	97-074 May 1997	BellSouth	Kentucky	MCI	Rate Rebalancing financial condition
182.	2540 June 1997	New England Power	Rhode Island	PUC Staff	Divestiture Plan
183.	96-336-TP-CSS June 1997	Ameritech Ohio	Ohio	MCI	Access Charge reform Economic impacts
184.	WR97010052 July 1997	Maxim Sewerage Corp.	New Jersey	Ratepayer Advocate	Rate of Return
185.	97-300 August 1997	LG&E/KU	Kentucky	Attorney General	Merger Plan
186.	Case No. 8738 August 1997	Generic (oral testimony only)	Maryland	Dept. of Natural Resources	Electric Restructuring Policy
187.	Docket No. 2592 September 1997	Eastern Utilities	Rhode Island	PUC Staff	Generation Divestiture
188.	Case No.97-247 September 1997	Cincinnati Bell Telephone	Kentucky	MCI	Financial Condition

Expert Testimony
of Matthew I. Kahal

	Docket Number	Utility	Jurisdiction	Client	Subject
189.	Docket No. U-20925 November 1997	Entergy Louisiana	Louisiana	PSC Staff	Rate of Return
190.	Docket No. D97.7.90 November 1997	Montana Power Co.	Montana	Montana Consumers Counsel	Stranded Cost
191.	Docket No. EO97070459 November 1997	Jersey Central Power & Light Co.	New Jersey	Ratepayer Advocate	Stranded Cost
192.	Docket No. R-00974104 November 1997	Duquesne Light Co.	Pennsylvania	Office of Consumer Advocate	Stranded Cost
193.	Docket No. R-00973981 November 1997	West Penn Power Co.	Pennsylvania	Office of Consumer Advocate	Stranded Cost
194.	Docket No. A-1101150F0015 November 1997	Allegheny Power System DQE, Inc.	Pennsylvania	Office of Consumer Advocate	Merger Issues
195.	Docket No. WR97080615 January 1998	Consumers NJ Water Company	New Jersey	Ratepayer Advocate	Rate of Return
196.	Docket No. R-00974149 January 1998	Pennsylvania Power Company	Pennsylvania	Office of Consumer Advocate	Stranded Cost
197.	Case No. 8774 January 1998	Allegheny Power System DQE, Inc.	Maryland	Dept. of Natural Resources MD Energy Administration	Merger Issues
198.	Docket No. U-20925 (SC) March 1998	Entergy Louisiana, Inc.	Louisiana	Commission Staff	Restructuring, Stranded Costs, Market Prices
199.	Docket No. U-22092 (SC) March 1998	Entergy Gulf States, Inc.	Louisiana	Commission Staff	Restructuring, Stranded Costs, Market Prices
200.	Docket Nos. U-22092 (SC) and U-20925(SC) May 1998	Entergy Gulf States and Entergy Louisiana	Louisiana	Commission Staff	Standby Rates
201.	Docket No. WR98010015 May 1998	NJ American Water Co.	New Jersey	Ratepayer Advocate	Rate of Return
202.	Case No. 8794 December 1998	Baltimore Gas & Electric Co.	Maryland	MD Energy Admin./Dept. Of Natural Resources	Stranded Cost/ Transition Plan

Expert Testimony
of Matthew I. Kahal

	Docket Number	Utility	Jurisdiction	Client	Subject
203.	Case No. 8795 December 1998	Delmarva Power & Light Co.	Maryland	MD Energy Admin./Dept. Of Natural Resources	Stranded Cost/ Transition Plan
204.	Case No. 8797 January 1998	Potomac Edison Co.	Maryland	MD Energy Admin./Dept. Of Natural Resources	Stranded Cost/ Transition Plan
205.	Docket No. WR98090795 March 1999	Middlesex Water Co.	New Jersey	Ratepayer Advocate	Rate of Return
206.	Docket No. 99-02-05 April 1999	Connecticut Light & Power	Connecticut	Attorney General	Stranded Costs
207.	Docket No. 99-03-04 May 1999	United Illuminating Company	Connecticut	Attorney General	Stranded Costs
208.	Docket No. U-20925 (FRP) June 1999	Entergy Louisiana, Inc.	Louisiana	Staff	Capital Structure
209.	Docket No. EC-98-40-000, et al. May 1999	American Electric Power/ Central & Southwest	FERC	Arkansas PSC	Market Power Mitigation
210.	Docket No. 99-03-35 July 1999	United Illuminating Company	Connecticut	Attorney General	Restructuring
211.	Docket No. 99-03-36 July 1999	Connecticut Light & Power Co.	Connecticut	Attorney General	Restructuring
212.	WR99040249 Oct. 1999	Environmental Disposal Corp.	New Jersey	Ratepayer Advocate	Rate of Return
213.	2930 Nov. 1999	NEES/EUA	Rhode Island	Division Staff	Merger/Cost of Capital
214.	DE99-099 Nov. 1999	Public Service New Hampshire	New Hampshire	Consumer Advocate	Cost of Capital Issues
215.	00-01-11 Feb. 2000	Con Ed/NU	Connecticut	Attorney General	Merger Issues
216.	Case No. 8821 May 2000	Reliant/ODEC	Maryland	Dept. of Natural Resources	Need for Power/Plant Operations

Expert Testimony
of Matthew I. Kahal

	Docket Number	Utility	Jurisdiction	Client	Subject
217.	Case No. 8738 July 2000	Generic	Maryland	Dept. of Natural Resources	DSM Funding
218.	Case No. U-23356 June 2000	Entergy Louisiana, Inc.	Louisiana	PSC Staff	Fuel Prudence Issues Purchased Power
219.	Case No. 21453, et al July 2000	SWEPCO	Louisiana	PSC Staff	Stranded Costs
220.	Case No. 20925 (B) July 2000	Entergy Louisiana	Louisiana	PSC Staff	Purchase Power Contracts
221.	Case No. 24889 August 2000	Entergy Louisiana	Louisiana	PSC Staff	Purchase Power Contracts
222.	Case No. 21453, et al. February 2001	CLECO	Louisiana	PSC Staff	Stranded Costs
223.	P-00001860 and P-0000181 March 2001	GPU Companies	Pennsylvania	Office of Consumer Advocate	Rate of Return
224.	CVOL-0505662-S March 2001	ConEd/NU	Connecticut Superior Court	Attorney General	Merger (Affidavit)
225.	U-20925 (SC) March 2001	Entergy Louisiana	Louisiana	PSC Staff	Stranded Costs
226.	U-22092 (SC) March 2001	Entergy Gulf States	Louisiana	PSC Staff	Stranded Costs
227.	U-25533 May 2001	Entergy Louisiana/ Gulf States	Louisiana Interruptible Service	PSC Staff	Purchase Power
228.	P-00011872 May 2001	Pike County Pike	Pennsylvania	Office of Consumer Advocate	Rate of Return
229.	8893 July 2001	Baltimore Gas & Electric Co.	Maryland	MD Energy Administration	Corporate Restructuring
230.	8890 September 2001	Potomac Electric/Connectivity	Maryland	MD Energy Administration	Merger Issues

Expert Testimony
of Matthew I. Kahal

	Docket Number	Utility	Jurisdiction	Client	Subject
231.	U-25533 August 2001	Entergy Louisiana / Gulf States	Louisiana	Staff	Purchase Power Contracts
232.	U-25965 November 2001	Generic	Louisiana	Staff	RTO Issues
233.	3401 March 2002	New England Gas Co.	Rhode Island	Division of Public Utilities	Rate of Return
234.	99-833-MJR April 2002	Illinois Power Co.	U.S. District Court	U.S. Department of Justice	New Source Review
235.	U-25533 March 2002	Entergy Louisiana/ Gulf States	Louisiana	PSC Staff	Nuclear Uprates Purchase Power
236.	P-00011872 May 2002	Pike County Power & Light	Pennsylvania	Consumer Advocate	POLR Service Costs
237.	U-26361, Phase I May 2002	Entergy Louisiana/ Gulf States	Louisiana	PSC Staff	Purchase Power Cost Allocations
238.	R-00016849C001 et al. June 2002	Generic	Pennsylvania	Pennsylvania OCA	Rate of Return
239.	U-26361, Phase II July 2002	Entergy Louisiana/ Entergy Gulf States	Louisiana	PSC Staff	Purchase Power Contracts
240.	U-20925(B) August 2002	Entergy Louisiana	Louisiana	PSC Staff	Tax Issues
241.	U-26531 October 2002	SWEPCO	Louisiana	PSC Staff	Purchase Power Contract
242.	8936 October 2002	Delmarva Power & Light	Maryland	Energy Administration Dept. Natural Resources	Standard Offer Service
243.	U-25965 November 2002	SWEPCO/AEP	Louisiana	PSC Staff	RTO Cost/Benefit
244.	8908 Phase I November 2002	Generic	Maryland	Energy Administration Dept. Natural Resources	Standard Offer Service
245.	02S-315EG November 2002	Public Service Company of Colorado	Colorado	Fed. Executive Agencies	Rate of Return

Expert Testimony
of Matthew I. Kahal

	Docket Number	Utility	Jurisdiction	Client	Subject
246.	EL02-111-000 December 2002	PJM/MISO	FERC	MD PSC	Transmission Ratemaking
247.	02-0479 February 2003	Commonwealth Edison	Illinois	Dept. of Energy	POLR Service
248.	PL03-1-000 March 2003	Generic	FERC	NASUCA	Transmission Pricing (Affidavit)
249.	U-27136 April 2003	Entergy Louisiana	Louisiana	Staff	Purchase Power Contracts
250.	8908 Phase II July 2003	Generic	Maryland	Energy Administration Dept. of Natural Resources	Standard Offer Service
251.	U-27192 June 2003	Entergy Louisiana and Gulf States	Louisiana	LPSC Staff	Purchase Power Contract Cost Recovery
252.	C2-99-1181 October 2003	Ohio Edison Company	U.S. District Court	U.S. Department of Justice, et al.	Clean Air Act Compliance Economic Impact (Report)
253.	RP03-398-000 December 2003	Northern Natural Gas Co.	FERC	Municipal Distributors Group/Gas Task Force	Rate of Return
254.	8738 December 2003	Generic	Maryland	Energy Admin Department of Natural Resources	Environmental Disclosure (oral only)
255.	U-27136 December 2003	Entergy Louisiana, Inc.	Louisiana	PSC Staff	Purchase Power Contracts
256.	U-27192, Phase II October/December 2003	Entergy Louisiana & Entergy Gulf States	Louisiana	PSC Staff	Purchase Power Contracts
257.	WC Docket 03-173 December 2003	Generic	FCC	MCI	Cost of Capital (TELRIC)
258.	ER 030 20110 January 2004	Atlantic City Electric	New Jersey	Ratepayer Advocate	Rate of Return
259.	E-01345A-03-0437 January 2004	Arizona Public Service Company	Arizona	Federal Executive Agencies	Rate of Return
260.	03-10001 January 2004	Nevada Power Company	Nevada	U.S. Dept. of Energy	Rate of Return

Expert Testimony
of Matthew I. Kahal

	Docket Number	Utility	Jurisdiction	Client	Subject
261.	R-00049255 June 2004	PPL Elec. Utility	Pennsylvania	Office of Consumer Advocate	Rate of Return
262.	U-20925 July 2004	Entergy Louisiana, Inc.	Louisiana	PSC Staff	Rate of Return Capacity Resources
263.	U-27866 September 2004	Southwest Electric Power Co.	Louisiana	PSC Staff	Purchase Power Contract
264.	U-27980 September 2004	Cleco Power	Louisiana	PSC Staff	Purchase Power Contract
265.	U-27865 October 2004	Entergy Louisiana, Inc. Entergy Gulf States	Louisiana	PSC Staff	Purchase Power Contract
266.	RP04-155 December 2004	Northern Natural Gas Company	FERC	Municipal Distributors Group/Gas Task Force	Rate of Return
267.	U-27836 January 2005	Entergy Louisiana/ Gulf States	Louisiana	PSC Staff	Power plant Purchase and Cost Recovery
268.	U-199040 et al. February 2005	Entergy Gulf States/ Louisiana	Louisiana	PSC Staff	Global Settlement, Multiple rate proceedings
269.	EF03070532 March 2005	Public Service Electric & Gas	New Jersey	Ratepayers Advocate	Securitization of Deferred Costs
270.	05-0159 June 2005	Commonwealth Edison	Illinois	Department of Energy	POLR Service
271.	U-28804 June 2005	Entergy Louisiana	Louisiana	LPSC Staff	QF Contract
272.	U-28805 June 2005	Entergy Gulf States	Louisiana	LPSC Staff	QF Contract
273.	05-0045-EI June 2005	Florida Power & Lt.	Florida	Federal Executive Agencies	Rate of Return
274.	9037 July 2005	Generic	Maryland	MD. Energy Administration	POLR Service
275.	U-28155 August 2005	Entergy Louisiana Entergy Gulf States	Louisiana	LPSC Staff	Independent Coordinator of Transmission Plan

Expert Testimony
of Matthew I. Kahal

	Docket Number	Utility	Jurisdiction	Client	Subject
276.	U-27866-A September 2005	Southwestern Electric Power Company	Louisiana	LPSC Staff	Purchase Power Contract
277.	U-28765 October 2005	Cleco Power LLC	Louisiana	LPSC Staff	Purchase Power Contract
278.	U-27469 October 2005	Entergy Louisiana Entergy Gulf States	Louisiana	LPSC Staff	Avoided Cost Methodology
279.	A-313200F007 October 2005	Sprint (United of PA)	Pennsylvania	Office of Consumer Advocate	Corporate Restructuring
280.	EM05020106 November 2005	Public Service Electric & Gas Company	New Jersey	Ratepayer Advocate	Merger Issues
281.	U-28765 December 2005	Cleco Power LLC	Louisiana	LPSC Staff	Plant Certification, Financing, Rate Plan
282.	U-29157 February 2006	Cleco Power LLC	Louisiana	LPSC Staff	Storm Damage Financing
283.	U-29204 March 2006	Entergy Louisiana Entergy Gulf States	Louisiana	LPSC Staff	Purchase power contracts
284.	A-310325F006 March 2006	Alltel	Pennsylvania	Office of Consumer Advocate	Merger, Corporate Restructuring
285.	9056 March 2006	Generic	Maryland	Maryland Energy Administration	Standard Offer Service Structure
286.	C2-99-1182 April 2006	American Electric Power Utilities	U. S. District Court Southern District, Ohio	U. S. Department of Justice	New Source Review Enforcement (expert report)
287.	EM05121058 April 2006	Atlantic City Electric	New Jersey	Ratepayer Advocate	Power plant Sale
288.	ER05121018 June 2006	Jersey Central Power & Light Company	New Jersey	Ratepayer Advocate	NUG Contracts Cost Recovery
289.	U-21496, Subdocket C June 2006	Cleco Power LLC	Louisiana	Commission Staff	Rate Stabilization Plan
290.	GR0510085 June 2006	Public Service Electric & Gas Company	New Jersey	Ratepayer Advocate	Rate of Return (gas services)

Expert Testimony
of Matthew I. Kahal

	Docket Number	Utility	Jurisdiction	Client	Subject
291.	R-000061366 July 2006	Metropolitan Ed. Company Penn. Electric Company	Pennsylvania	Office of Consumer Advocate	Rate of Return
292.	9064 September 2006	Generic	Maryland	Energy Administration	Standard Offer Service
293.	U-29599 September 2006	Cleco Power LLC	Louisiana	Commission Staff	Purchase Power Contracts
294.	WR06030257 September 2006	New Jersey American Water Company	New Jersey	Rate Counsel	Rate of Return
295.	U-27866/U-29702 October 2006	Southwestern Electric Power Company	Louisiana	Commission Staff	Purchase Power/Power Plant Certification
296.	9063 October 2006	Generic	Maryland	Energy Administration Department of Natural Resources	Generation Supply Policies
297.	EM06090638 November 2006	Atlantic City Electric	New Jersey	Rate Counsel	Power Plant Sale
298.	C-2000065942 November 2006	Pike County Light & Power	Pennsylvania	Consumer Advocate	Generation Supply Service
299.	ER06060483 November 2006	Rockland Electric Company	New Jersey	Rate Counsel	Rate of Return
300.	A-110150F0035 December 2006	Duquesne Light Company	Pennsylvania	Consumer Advocate	Merger Issues
301.	U-29203, Phase II January 2007	Entergy Gulf States Entergy Louisiana	Louisiana	Commission Staff	Storm Damage Cost Allocation
302.	06-11022 February 2007	Nevada Power Company	Nevada	U.S. Dept. of Energy	Rate of Return
303.	U-29526 March 2007	Cleco Power	Louisiana	Commission Staff	Affiliate Transactions
304.	P-00072245 March 2007	Pike County Light & Power	Pennsylvania	Consumer Advocate	Provider of Last Resort Service
305.	P-00072247 March 2007	Duquesne Light Company	Pennsylvania	Consumer Advocate	Provider of Last Resort Service

Expert Testimony
of Matthew I. Kahal

	Docket Number	Utility	Jurisdiction	Client	Subject
306.	EM07010026 May 2007	Jersey Central Power & Light Company	New Jersey	Rate Counsel	Power Plant Sale
307.	U-30050 June 2007	Entergy Louisiana Entergy Gulf States	Louisiana	Commission Staff	Purchase Power Contract
308.	U-29956 June 2007	Entergy Louisiana	Louisiana	Commission Staff	Black Start Unit
309.	U-29702 June 2007	Southwestern Electric Power Company	Louisiana	Commission Staff	Power Plant Certification
310.	U-29955 July 2007	Entergy Louisiana Entergy Gulf States	Louisiana	Commission Staff	Purchase Power Contracts
311.	2007-67 July 2007	FairPoint Communications	Maine	Office of Public Advocate	Merger Financial Issues
312.	P-00072259 July 2007	Metropolitan Edison Co.	Pennsylvania	Office of Consumer Advocate	Purchase Power Contract Restructuring
313.	EO07040278 September 2007	Public Service Electric & Gas	New Jersey	Rate Counsel	Solar Energy Program Financial Issues
314.	U-30192 September 2007	Entergy Louisiana	Louisiana	Commission Staff	Power Plant Certification Ratemaking, Financing
315.	9117 (Phase II) October 2007	Generic (Electric)	Maryland	Energy Administration	Standard Offer Service Reliability
316.	U-30050 November 2007	Entergy Gulf States	Louisiana	Commission Staff	Power Plant Acquisition
317.	IPC-E-07-8 December 2007	Idaho Power Co.	Idaho	U.S. Department of Energy	Cost of Capital
318.	U-30422 (Phase I) January 2008	Entergy Gulf States	Louisiana	Commission Staff	Purchase Power Contract
319.	U-29702 (Phase II) February, 2008	Southwestern Electric Power Co.	Louisiana	Commission Staff	Power Plant Certification
320.	March 2008	Delmarva Power & Light	Delaware State Senate	Senate Committee	Wind Energy Economics

Expert Testimony
of Matthew I. Kahal

	Docket Number	Utility	Jurisdiction	Client	Subject
321.	U-30192 (Phase II) March 2008	Entergy Louisiana	Louisiana	Commission Staff	Cash CWIP Policy, Credit Ratings
322.	U-30422 (Phase II) April 2008	Entergy Gulf States - LA	Louisiana	Commission Staff	Power Plant Acquisition
323.	U-29955 (Phase II) April 2008	Entergy Gulf States - LA Entergy Louisiana	Louisiana	Commission Staff	Purchase Power Contract
324.	GR-070110889 April 2008	New Jersey Natural Gas Company	New Jersey	Rate Counsel	Cost of Capital
325.	WR-08010020 July 2008	New Jersey American Water Company	New Jersey	Rate Counsel	Cost of Capital
326.	U-28804-A August 2008	Entergy Louisiana	Louisiana	Commission Staff	Cogeneration Contract
327.	IP-99-1693C-M/S August 2008	Duke Energy Indiana	Federal District Court	U.S. Department of Justice/ Environmental Protection Agency	Clean Air Act Compliance (Expert Report)
328.	U-30670 September 2008	Entergy Louisiana	Louisiana	Commission Staff	Nuclear Plant Equipment Replacement
329.	9149 October 2008	Generic	Maryland	Department of Natural Resources	Capacity Adequacy/Reliability
330.	IPC-E-08-10 October 2008	Idaho Power Company	Idaho	U.S. Department of Energy	Cost of Capital
331.	U-30727 October 2008	Cleco Power LLC	Louisiana	Commission Staff	Purchased Power Contract
332.	U-30689-A December 2008	Cleco Power LLC	Louisiana	Commission Staff	Transmission Upgrade Project
333.	IP-99-1693C-M/S February 2009	Duke Energy Indiana	Federal District Court	U.S. Department of Justice/EPA	Clean Air Act Compliance (Oral Testimony)
334.	U-30192, Phase II February 2009	Entergy Louisiana, LLC	Louisiana	Commission Staff	CWIP Rate Request Plant Allocation
335.	U-28805-B February 2009	Entergy Gulf States, LLC	Louisiana	Commission Staff	Cogeneration Contract

Expert Testimony
of Matthew I. Kahal

	Docket Number	Utility	Jurisdiction	Client	Subject
336.	P-2009-2093055, et al. May 2009	Metropolitan Edison Pennsylvania Electric	Pennsylvania	Office of Consumer Advocate	Default Service
337.	U-30958 July 2009	Cleco Power	Louisiana	Commission Staff	Purchase Power Contract
338.	EO08050326 August 2009	Jersey Central Power Light Co.	New Jersey	Rate Counsel	Demand Response Cost Recovery
339.	GR09030195 August 2009	Elizabethtown Gas	New Jersey	New Jersey Rate Counsel	Cost of Capital
340.	U-30422-A August 2009	Entergy Gulf States	Louisiana	Staff	Generating Unit Purchase
341.	CV 1:99-01693 August 2009	Duke Energy Indiana	Federal District Court – Indiana	U. S. DOJ/EPA, *et al.*	Environmental Compliance Rate Impacts (Expert Report)
342.	4065 September 2009	Narragansett Electric	Rhode Island	Division Staff	Cost of Capital
343.	U-30689 September 2009	Cleco Power	Louisiana	Staff	Cost of Capital, Rate Design, Other Rate Case Issues
344.	U-31147 October 2009	Entergy Gulf States Entergy Louisiana	Louisiana	Staff	Purchase Power Contracts
345.	U-30913 November 2009	Cleco Power	Louisiana	Staff	Certification of Generating Unit
346.	M-2009-2123951 November 2009	West Penn Power	Pennsylvania	Office of Consumer Advocate	Smart Meter Cost of Capital (Surrebuttal Only)
347.	GR09050422 November 2009	Public Service Electric & Gas Company	New Jersey	Rate Counsel	Cost of Capital
348.	D-09-49 November 2009	Narragansett Electric	Rhode Island	Division Staff	Securities Issuances
349.	U-29702, Phase II November 2009	Southwestern Electric Power Company	Louisiana	Commission Staff	Cash CWIP Recovery
350.	U-30981 December 2009	Entergy Louisiana Entergy Gulf States	Louisiana	Commission Staff	Storm Damage Cost Allocation

Expert Testimony
of Matthew I. Kahal

	Docket Number	Utility	Jurisdiction	Client	Subject
351.	U-31196 (ITA Phase) February 2010	Entergy Louisiana	Louisiana	Staff	Purchase Power Contract
352.	ER09080668 March 2010	Rockland Electric	New Jersey	Rate Counsel	Rate of Return