BEFORE THE STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES
OFFICE OF ADMINISTRATIVE LAW

I/M/O THE PETITION OF	)	
UNITED WATER NEW JERSEY, INC.	)	**BPU DKT. NO. WR09120987**
FOR APPROVAL OF INCREASED	)	**OAL DKT. NO. PUCRL-01200-2010N**
RATES FOR WATER SERVICE AND	)	
OTHER TARIFF CHANGES	)	

DIRECT TESTIMONY OF MATTHEW I. KAHAL

ON BEHALF OF THE

NEW JERSEY DEPARTMENT OF THE PUBLIC ADVOCATE
DIVISION OF RATE COUNSEL

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Filed: June 8, 2010

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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 New Jersey Department of the Public Advocate, Division of Rate Counsel ("Rate Counsel") to develop a recommendation concerning the fair rate of return on the water utility rate base of United Water New Jersey, Inc. ("UWNJ" 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 annual revenue requirement in this case.

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

A. As presented on Exhibit P-8, Schedule PMA-1, page 1 of 14, the Company requests an authorized overall rate of return of 8.62 percent. The proposed capital structure is indicated as being the Company's consolidated actual at September 30, 2009, and includes 54.35 percent common equity, 1.24 percent preferred stock and 44.41 percent long-term debt. This capital structure is somewhat more equity rich than the Company's "50/50" target capital structure and excludes any recognition of short-term debt. The Company requests a return on the common equity component of 11.15 percent. The overall rate of return and cost of debt recommendations are sponsored by the Company's witness, Ms. Pauline M. Ahern, the Company's consultant on cost of capital. Ms. Ahern's 11.15 percent return on equity ("ROE") is based on the results of her various studies.

Q. WHY DOES THE COMPANY USE A HISTORIC CAPITAL STRUCTURE RATHER THAN AN END OF TEST YEAR CAPITAL STRUCTURE?

A. Exhibit P-4, Schedule 7 indicates that the requested capital structure in this case is intended to be pro forma at July 31, 2010 ("post test year"). The response to RCR-ROR-1 indicates that the actual (consolidated) capital structure at September 30, 2009 is very similar to its expected capital structure at July 31, 2010, and the recent historic figures are used for that reason.

Q. WHAT IS THE COMPANY'S AUTHORIZED RETURN ON EQUITY FROM ITS LAST BASE RATE CASE?

A. My understanding is that the Company's currently authorized return on equity is 10.3 percent, with an approved common equity ratio of 50.92 percent. Hence, in this case Ms. Ahern recommends a major increase over the Company's currently authorized return on equity and equity ratio. (Response to RCR-ROR-25)

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

A. As summarized on Schedule MIK-1, page 2 of 3, I am recommending a return on UWNJ's water utility rate base of 7.35 percent. This includes a return on common equity of 10.0 percent and a capital structure of 51 percent total debt (inclusive of short-term debt), 48 percent common equity and 1 percent preferred equity. This capital structure is provisional and may change with updating. It includes the Company's statement of its updated common equity, preferred stock and long-term debt (i.e., its update for March 31, 2010, provided in response to RCR-ROR-27) and short-term debt averaged over period August 2009-March 2010. Please note that the capital structure is the UWNJ consolidated, including the United Water New York capital. (The use of consolidated capitalization is consistent with past practice in UWNJ rate cases.)

I also present a rate of return recommendation based on the assumption that short-term debt is *excluded* from capital structure. As shown on page 1 of Schedule MIK-1, this produces an overall rate of return of 7.91 percent. This higher return (subject to updating) would be appropriate if UWNJ would agree to directly assign its usage of short-term debt to construction work in progress (CWIP) for purposes of calculating its Allowance for Funds Used During Construction (AFUDC accruals). Presently, the Company does not do so.

Q. HOW DOES YOUR CAPITAL STRUCTURE DIFFER FROM THAT PROPOSED BY THE COMPANY?

A. The only difference at this time (other than updating as discussed above) pertains to short-term debt. My assumption is that the Company will provide any rate of return update later in this case, such as at the time of its rebuttal filing.

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 two groups of utility companies -- gas and water. The use of gas and water distribution company proxy groups is consistent with Ms. Ahern's cost of equity approach. These studies produce a wide range of results, with lower-end estimates potentially as low as about 9.4 percent to and as high as 10.6 percent. My recommendation of 10.0 percent 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 range of plausible data inputs is used, with a potential midpoint of about 9 percent. As my testimony explains, the CAPM currently produces cost of equity results that are lower than in the past (due to the low prevailing yields on U.S. Treasury bonds) and should not be given as much weight as they would under more normal circumstances.

Q. PLEASE SUMMARIZE YOUR DCF STUDY EVIDENCE.

A. Consistent with witness Ahern, I am utilizing proxy groups of gas distribution companies and water companies to estimate the DCF cost of equity. The gas distribution company group produces a cost of equity range of 9.4 to 9.9 percent, with a midpoint of 9.7 percent. The water company DCF range is 9.6 to 10.6 percent and a midpoint of 10.1 percent. The average of these two midpoints is 9.9 and I have rounded that result to 10.0 percent.

It should be noted that, like Ms. Ahern, I have not included an adjustment factor for flotation expenses. However, Ms. Ahern does include a very small adjustment (i.e., about 0.1 percent) for business risk that I believe is improper.

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

A. Yes, very much so. UWNJ provides monopoly water utility service in its New Jersey service territory, subject to the regulatory oversight of this Board. There is no indication of any material increase in business or financial risk relative to other utilities in recent years. In Section III of my testimony I discuss the risk attributes for the Company (and water and gas utilities generally) presented in recent credit rating reports and elsewhere.

B. Capital Cost Trends

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 bonds (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]

[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.

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.

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 UWNJ.

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 UWNJ's equity cost rate associated with providing water 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 is consistent with Ms. Ahern's testimony.

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 UWNJ). 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 UWNJ's authorized return on equity, as proposed in this case and recommended by Ms. Ahern.

C. Remainder of Testimony

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 Ms. Ahern on behalf of the Company and her 11.15 percent cost of equity recommendation.

III. CAPITAL STRUCTURE, RISK AND OVERALL RETURN

A. Capital Structure

Q. WHAT CAPITAL STRUCTURE IS THE COMPANY UTILIZING IN THIS CASE?

A. The Company's filed case capital structure utilizes a 54.35 percent common equity, 44.41 percent long-term debt and 1.24 percent preferred stock based on projected, pro forma capitalization at July 31, 2010. In reality, this is the asserted actual capital structure at September 30, 2009, but the Company stated that it expects no material changes to that capital structure through July 2010. Thus no new issuances of debt or equity were identified for capital structure purposes. In response to RCR-ROR-27 and 28, the Company supplied updates to its capital structure and embedded cost of debt at March 31, 2010. (See Schedule MIK-1, page 1 of 3.) The updated common equity ratio declined from 54.35 percent to 52.97 percent, and embedded cost of debt declined from 5.64 to 5.57 percent. I have incorporated these updates into my recommendation in this case.

Q. DOES THE COMPANY INCLUDE SHORT-TERM DEBT IN CAPITAL STRUCTURE?

A. No, it does not. As shown on my Schedule MIK-1, page 3 of 3, the Company does make significant use of short-term debt, with the balances averaging nearly $100 million during the most recent 12 months. The average for the 12 months ending March 2010 is $97 million, or about 12 percent of total capital.

According to the response to RCR-ROR-5, the Company chose to exclude short-term debt from capital structure because it believes current and recent historic levels are abnormally high. Presumably, this means that the use of short-term debt will diminish in the future. The response goes on to state that the inclusion of short-term debt in capital structure is improper because it is not “permanent capital.”

The problem with the Company’s position is that it totally ignores short-term debt (instead of including a “normalized” amount), despite the prominent role that it plays in financing its operations at this time. It is common practice for utilities to directly assign short-term debt to finance construction work in progress (CWIP) in lieu of including it in the ratemaking capital structure, but UWNJ does not do that, again, totally ignoring short-term debt in its calculated rate for Allowance for Funds Used During Construction (AFUDC). As shown in response to RAR-ROR-12, UWNJ uses a tax grossed-up return of 10.91 percent for AFUDC purposes, compared to its short-term debt cost rate of only about 1 percent.

Q. WHAT IS YOUR POSITION?

A. Short-term debt is used in some manner to help finance the Company’s operations, and it therefore must be recognized in some reasonable way as part of the ratemaking process. This is particularly important because (a) short-term debt is a very low cost source of capital; and (b) it is taken into account by rating agencies in assessing a company’s credit quality. I also would note that the Company includes in its claimed rate base in this case (as it has in the past) certain “non-permanent” assets, i.e., materials and supplies and working capital.

There are two alternative methods of appropriately accounting for short-term debt and its cost savings as part of ratemaking. The first method is simply to include it directly in capital structure as contributing to the financing of rate base. This method directly and promptly provides the savings to customers from this low-cost financing. I show this on page 2 of Schedule MIK-1. A second method is to exclude it from capital structure (as shown on page 1 of Schedule MIK-1) but instead directly assign short-term debt to CWIP for purposes of calculating the construction period carrying charges (i.e., AFUDC). This method reduces AFUDC accruals (compared to the Company's approach), and ratepayers thereby will ultimately receive the benefit of a reduced plant-in-service in future years. This is because AFUDC is a component of plant in-service.

A third option, ignoring short-term debt entirely for ratemaking purposes, would not be reasonable and would overcharge ratepayers, either by overstating rate of return or by overstating the cost of future plant in service.

Q. WHAT IS YOUR RECOMMENDATION?

A. I have calculated the overall rate of return both with and without short-term debt, using the 12-month average ending March 2010. My recommendation is to *include* short-term debt *unless* the Company commits that it will directly assign its actual short-term debt to CWIP for AFUDC accrual purposes.[2] Directly assigning short-term debt to CWIP will ensure that the Company flows through to ratepayers the savings associated with short-term debt financing. Either of these treatments of short-term debt would be acceptable since in both cases the savings are (eventually) recognized in rates.

Q. DOES THE COMPANY CITE ANY AUTHORITY FOR EXCLUDING SHORT-TERM DEBT FROM ITS AFUDC MECHANISM?

A. No. In response to RAR-ROR-12, the Company merely indicates that the Board has not specifically ordered the Company to include short-term debt. I interpret this to

[2] I note that there is a sharp drop off in short-term debt balances after July 2009. For the period August 2009-March 2010, short-term debt averages about $80 million instead of $97 million, which is the 12-month average. The $80 million amount appears to be a more realistic level going forward.

mean that the issue has not previously been presented to the Board and adjudicated. The response implies that the Board has not explicitly supported UWNJ's position on this question.

Q. WHAT COST RATE FOR SHORT-TERM ARE YOU USING?

A. At this time, I am using 2.0 percent as the short-term debt rate. This is well above the Company's average short-term borrowing rate during the past year of about 1.0 percent. (See page 3 of Schedule MIK-1.) However, as the U.S. economy recovers, Fed policy is likely to support an increase to some degree in short-term interest rates.

Q. WHAT IS YOUR RECOMMENDED OVERALL RETURN?

A. Subject to updating, I am recommending an overall return on rate base at this time of 7.35 percent. This uses a capital structure of 47.97 percent common equity, 9.45 percent short-term debt, 41.52 percent long-term debt and a very minor amount of preferred stock. If short-term debt is excluded, my overall return at this time is 7.91 percent, with a 52.97 percent equity ratio. In both cases, I use a provisional 5.57 percent embedded cost of long-term debt (subject to updating) and a cost of equity of 10.0 percent.

Q. DOES MS. AHERN'S 54.35 PERCENT COMMON EQUITY RATIO FOR UNITED COMPORT WITH THAT OF HER WATER COMPANY PROXY GROUP?

A. No, it is more equity laiden. Ms. Ahern's Schedule PMA-4, page 1 of 3, shows a five-year average common equity ratio (for 2004-2008) of 51 percent without short-term debt and 49 percent with short-term debt for her proxy group of seven water companies. Ms. Ahern has not shown that a 54 percent common equity ratio is needed for UWNJ to meet industry standards. This overly expensive capital structure adds unnecessarily to the cost of the Company's rate request in this case. The inclusion of short-term debt (and updating) would mitigate this problem.

B. <u>UWNJ Investment Risk</u>

Q. DOES MS. AHERN DISCUSS THE RISKS ASSOCIATED WITH UWNJ'S REGULATED UTILITY OPERATIONS?

A. Yes. Her testimony discusses generic water utility industry risk factors, most prominently the capital investments needed to comply with the Safe Drinking Water Act. In addition, her testimony includes an extensive discussion of "firm size" as a risk factor, and she includes a small risk adjustment for UWNJ as compared to her gas proxy companies to compensate for the Company's allegedly smaller size.

Q. DOES MS. AHERN ASSERT THAT ANY SIGNIFICANT CHANGES HAVE OCCURRED IN UWNJ'S RISK PROFILE SINCE ITS LAST RATE CASE?

A. No, she provides no evidence that would indicate a material change in the Company's investment risk since its last rate case, nor has there been a credit rating downgrading.

Q. IS UWNJ AN INDEPENDENT WATER COMPANY?

A. No, it is not. UWNJ is a wholly-owned subsidiary of United Water, Inc. (United), a holding company that owns numerous water utility companies across the United States. It is one of the nation's largest investor-owned water systems. The ultimate parent of both United and UWNJ is the massive French company, Suez Environment, which was spun off from Suez S. A. in 2008. Due to these complex holding company arrangements, there are no market data available for UWNJ. Instead, the Company receives equity infusions from time to time from its parent.

Q. IS UWNJ RATED BY MAJOR CREDIT RATING AGENCIES?

A. Yes, it is. In response to RAR-ROR-2, the Company supplied credit rating reports from Standard & Poors issued during the past two years. UWNJ is rated A- ("Stable"), based on the most recent report dated May 28, 2009. Please note that S&P generally considers water utilities to have low business risk, lumping together water utilities with gas distribution and electric distribution utility companies.

Q. WHAT IS S&P'S ASSESSMENT OF THE COMPANY'S BUSINESS RISK?

A. S&P has a highly favorable view of both UWNJ and its affiliate United Water Work Inc. ("UWW") as summarized in its recent report:

> UWNJ and UWW stand-alone business risk profile is excellent. The excellent business risk profile reflects a favorable regulatory environment, no retail competition in their service territories, geographic diversity, largely residential markets, and relatively low operating risk. (S&P May 28, 2009)

S&P also cites certain negatives for credit quality that include clean water compliance costs, a need to improve the financial profile and the business risks of the parent company's non-regulated operations. S&P also notes that financial performance is appropriate for its rating with a debt to capital ratio of 58 percent. (Id.) This ratio compares with the 45 percent debt ratio proposed in this case by the Company.

Q. DO INVESTORS REGARD WATER UTILITIES AS RELATIVELY SAFE INVESTMENTS?

A. Yes, I believe so. The Value Line Investment Survey, which in the past has had an unfavorable view of water utilities, has acknowledged that water utilities are relative "safe haven" investments. In particular, Value Line ranked the water utility industry that it covers as 94th in "timeliness" out of its 99 industries in January 2008. By

January 2009, the industry timeliness rating had risen to 17th.[3] Value Line's October 24, 2008 industry report explains its changed assessment for the water utility industry as follows:

> Water utility stocks have given little, if any ground…the primary reason for the share price strength boils down to their perceived safety. Indeed, because of the steady stream of income these stocks generate and the necessity for water itself, the group provides shelter for investors looking to get out of the treacherous economic waters.
>
> * * * * * * *
>
> The economic backdrop is likely to remain difficult for the foreseeable future and these stocks stand to be the beneficiaries, as investors look to ride out the rough investment waters in less volatile areas of the market.

Value Line clearly sees water utility companies as the low-risk option compared to other equity investments.

Q. HAS THIS INVESTMENT "SAFE HAVEN" EFFECT ALSO PREVAILED FOR THE GAS DISTRIBUTION COMPANIES THAT ARE LUMPED TOGETHER WITH WATER COMPANIES?

A. Yes. As mentioned earlier, S&P groups water utilities with gas and electric distribution ("wires and pipes") utilities for business risk profile assessment purposes. Both Ms. Ahern and I employ gas distribution proxy groups in this case due to the risk similarity with water utilities in general and UWNJ specifically. Since the onset of the financial crisis in 2008, gas utility stocks have been far more stable, particularly for gas utility companies not burdened by the exposure of substantial non-utility operations. One measure of this improvement is the trend in utility

[3] As a note of caution, timeliness is Value Line's assessment of attractiveness or investment value at prevailing share prices and should not be unambiguously interpreted as a risk measure.

"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 gas 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 UWNJ SHARE IN THIS RISK REDUCTION?

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

Q. DOES MS. AHERN RECOGNIZE THIS LOW BUSINESS RISK OR SAFE HAVEN ATTRIBUTE OF WATER/GAS UTILITIES?

A. I do not believe she does. Her analysis implicitly finds little difference between water/gas utilities and the stock market as a whole. In addition, her testimony claims that UWNJ is entitled to a risk adjustment due to its small size. Her size adjustment is relatively minor and is therefore of little practical importance to her final recommendation. Nonetheless, the adjustment is incorrect, as I explain later in my testimony.

IV. <u>COST OF COMMON EQUITY CALCULATIONS</u>

A. <u>Using the DCF Model</u>

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. Ms. Ahern does not propose a performance adder in this case for UWNJ.

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. UWNJ'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 utility companies, a gas group and a water group. 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 Ms. Ahern), 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 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 UWNJ, which is a wholly-owned subsidiary of United's parent (and indirectly by Suez Environment), and therefore a market proxy is needed. In theory, Suez Environment could serve as a market proxy, but given its extensive diversified and international operations, that would not be reasonable. I also believe that it is not desirable to rely on a single company study.

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 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, Ms. Ahern also uses stock prices averaged over a three-month period, i.e., the three months ending October 2009, averaged with November 2009 spot prices. As discussed below, my testimony makes use of more recent market data.

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 utility companies and, in general, reasonably comparable to UWNJ. 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 water companies that comprise Ms. Ahern's water utility proxy group. Please note that my gas company group is very similar to Ms. Ahern's gas utility 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 gas utilities. Ms. Ahern also has eliminated UGI, NiSource, and New Jersey Resources, but has added one very small company, Delta Natural Gas, to her proxy group. In addition, she has eliminated two of my proxy gas utility companies, NICOR and South Jersey Industries.

B. DCF Study Using the Proxy Group of Gas Distribution Utility Companies

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 UWNJ.

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). 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 MS. AHERN PROPOSED A SPECIFIC RISK ADJUSTMENT TO THE COST OF EQUITY BETWEEN THE PROXY COMPANIES AND UWNJ?

A. I propose no specific adjustment pertaining to business risk in developing my cost of equity recommendation. Ms. Ahern includes a size-related risk adder for her gas utility study.

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). Ms. Ahern 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 Ms. Ahern 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 Ms. Ahern and I have used. This very strongly suggests that the five-year earnings growth rates that both she and I have used 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 lower end of my 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 in this case since neither UWNJ or its parent incurs such expenses. The only entity that could incur such costs is Suez Environment (i.e., the ultimate parent), but there is no indication that Suez has incurred or will incur such costs on behalf of UWNJ.

Q. MS. AHERN INCLUDES DELTA NATURAL GAS IN HER PROXY GROUP WHEREAS YOU EXCLUDED IT. DOES THAT EXCLUSION MATERIALLY AFFECT YOUR DCF RESULTS AND 10.0 PERCENT ROE?

A. No. I excluded Delta because it is a very small, relatively obscure gas utility company that is not even included in the Value Line Investment Survey natural gas utility industry group. However, the inclusion of Delta would not materially alter my cost of equity results.

Q. HOW DO YOUR GAS GROUP DCF RESULTS COMPARE TO MS. AHERN'S?

A. My range of 9.4 to 9.9 percent is somewhat higher than Ms. Ahern's "median" DCF estimate of 8.75 percent.

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. Neither Ms. Ahern nor I have made any downward adjustments to our DCF results to correct for this incremental, non-utility risk.

C. <u>Water Utility DCF Group Study</u>

Q. HOW HAVE YOU APPROACHED YOUR WATER UTILITY DCF STUDY?

A. I began with the same seven water companies selected by Ms. Ahern. The seven companies are listed on Schedule MIK-3, page 2 of 2, along with their Value Line risk attributes. Three of the seven are taken from the Value Line water company group, which presently includes a total of five companies. Both Ms. Ahern and I have eliminated two of the Value Line companies, American Water Works (AWW) and Southwest Water. AWW only recently emerged from its corporate spin-off from the larger German company, RWE, and is going through its transition to operating as an independent company. Southwest is in the process of being acquired by a group of investors and will no longer be a publically-traded company.

The other four companies are considered to be small water companies and are not covered in Value Line's standard edition. Instead, Value Line reports on them in its expanded, small company edition. In that edition, information is much more limited, with little or no data on financial projections. Specifically, Value Line does not prepare the five-year earnings or dividend projections for these companies.

Q. HOW DID YOU PROCEED WITH YOUR ANALYSIS?

A. My DCF analysis is shown on Schedule MIK-5 and parallels my gas company study. Page 2 of that schedule shows the monthly dividend yield for the seven company group for six months ending March 2010. For that time period, the group dividend yield is 3.53 percent, which I adjusted upward to 3.6 percent using the "0.5g" method. This is very similar to the water group dividend yield reported by Ms. Ahern.

As discussed further below, I determined a growth rate range of 6.0 to 7.0 percent. Combined with the adjusted dividend yield, the cost of equity for this group is 9.6 to 10.6 percent, with a midpoint of 10.1 percent.

Q. HOW DID YOU DERIVE YOUR GROWTH RATE RANGE OF 6.0 TO 7.0 PERCENT?

A. I present information on projected growth rates on pages 3 and 4 of Schedule MIK-5. Page 3 shows projected five-year growth rates in earnings per share published by the same four sources (Value Line, CNN, First Call and Zacks) discussed earlier. Page 4 provides the additional Value Line five-year projections for dividends per share, book value per share and earnings retention (i.e., growth from reinvesting earnings), but only for three of the companies since projections are not available for the other four.

I show the five-year earnings growth rates for the seven companies as averaging 8.48 percent. However, this figure is implausibly high for the relatively stable, slow growing water utilities. Moreover, for the four small companies listed on that schedule, Value line does not prepare and publish long-term financial projections. Zacks only reports an earnings projection for one of the four small companies (York Water). This is consistent with Ms. Ahern's source for earnings projections, Reuters.

As a result, I have concluded that the small company earnings projections are simply not useable for DCF purposes. This is due in part to the paucity of available data and in part due to difficulties of interpretation of the little data that is available. For example, page 3 of Schedule MIK-5 shows an average growth rate for the small water companies of nearly 10 percent. In fact, these companies characteristically exhibit fairly modest growth. I discuss this problem in greater detail in Section V.B in connection with Ms. Ahern's DCF study.

Q. GIVEN THESE PROBLEMS OF INTERPRETATION AND DATA AVAILABILITY, WHAT DO YOU CONCLUDE?

A. I have established a DCF growth range of 6.0 to 7.0 percent based only on the three larger water companies that Value Line includes in its standard addition. The upper bound of 7.0 percent is the long-term earnings growth rate shown on page 3 of Schedule MIK-5 (i.e., 6.95 percent). The 6.0 percent figure reflects Value Line's earnings retention growth rates (which can properly be interpreted as the sustainable growth rate) shown on page 4 of that schedule.

I insert this 6.0 to 7.0 percent DCF growth rate on my DCF summary, page 1 of Schedule MIK-5. When combined with the 3.6 percent adjusted dividend yield, the DCF cost of equity range is 9.6 to 10.6 percent, with a 10.1 percent midpoint.

Please note that the 10.6 percent upper bound assumes along-term earnings/dividend growth ret of 7.0 percent, which I believe to be a very aggressive assumption.

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 Ms. Ahern'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 Ms. Ahern 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 Ms. Ahern 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 Ms. Ahern 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 the proxy group companies average about 0.71 (i.e., gas and water companies combined). 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 0.71. 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 0.71 and an equity risk premium of 5 percent.

$$K_e = 4.5\ \% + 0.71\ (5.0) = 8.1\%$$

The upper end estimate also uses a risk-free rate of 4.5 percent, a proxy group beta of 0.71 and an equity risk premium of 8.0 percent.

$$K_e = 4.5\% + 0.71\ (8.0) = 10.2\%$$

Thus, with these inputs the CAPM provides a cost of equity range of about 8.1 to 10.2 percent, with a midpoint of 9.1 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 MS. AHERN'S MARKET RISK PREMIUM?

A. For her CAPM studies, Ms. Ahern has selected a market risk premium of 8.16 percent, which is above the upper end of my range. Using this estimate (which I believe is flawed), the CAPM result is:

$$K_e = 4.5\% + 0.71\ (8.16) = 10.3\%$$

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 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 Ms. Ahern's risk premium selection is somewhat above the upper end of that range. In my opinion, her risk premium is unreasonably high as I discussed in Section V.

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 Ms. Ahern and I have done.

V. MS. AHERN'S COST OF EQUITY METHODS

A. Overview of Methods and Recommendation

Q. HOW DOES MS. AHERN DEVELOP HER COST OF EQUITY RANGE?

A. Ms. Ahern employs four methods, with three being methods that produce market-based estimates (i.e., DCF, CAPM, and Risk Premium) and one that is not market-based (i.e., Comparable Earnings). The Comparable Earnings is not a recognized cost of equity method but rather a method that simply documents accounting return measures for other, non-regulated companies. For that reason, it does not fit with cost-based rate making and is irrelevant to the capital attraction standard.

Ms. Ahern presents a concise summary of the results that she obtains from her various studies applied to the water and gas utility company proxy groups. I reproduce her summary below on the table below for ease of reference, and I add a third column to her summary that averages the water and gas group results. It should be noted that Ms. Ahern omits the Comparable Earnings study for the gas utility group in developing her final reported results and her recommendation.

Summary of Ms. Ahern's Results

		Water Companies	Gas Companies	Average
(1)	DCF Studies	12.30%	8.75%	10.53%
(2)	Risk Premium	10.89	10.54	10.72
(3)	CAPM Studies	11.36	10.28	10.82
(4)	Comparable Earnings	13.50	--	--
(5)	"Indicated Cost"	12.20	9.90	11.05
(6)	Risk Adjustment	+0.00	+0.15	+0.075
(7)	**Ahern Recommendation**	**12.20%**	**10.05%**	**11.15%**

Source: Testimony, page 6.

B. The DCF Study

Q. WHAT IS YOUR DISAGREEMENT WITH MS. AHERN'S DCF STUDY?

A. I will limit my discussion to her water company DCF study, which purports to show a cost of equity of 12.30 percent. A return estimate that high in today's very low capital cost environment for very low-risk water companies (which certainly is the case for UWNJ) is simply not creditable. At the same time, she reports a DCF estimate for her gas utility group -- companies in the same general risk category as UWNJ -- as 8.75 percent. This is a difference of 355 basis points or a 41 percent cost of equity premium (i.e., 12.30/8.75 = 1.41). This makes no sense at all.

Q. WHAT ACCOUNTS FOR THIS EXTRAORDINARILY LARGE DISCREPANCY IN COST OF EQUITY RESULTS?

A. Ms. Ahern summarizes her DCF results on her Schedule PMA-7. She shows two methods of reporting her proxy group DCF estimates, the group "mean" and the group "median." Her preference is to utilize only the group median. In that regard, her adjusted median dividend yield is 3.50 percent and adjusted long-term growth rate is 7.5 percent. This totals to a DCF (i.e., "yield plus growth") return of 11.0 percent. However, she instead reports <u>12.30 percent</u> which happens to be her DCF result for just one company (and a very small one at that), Middlesex Water Company. Middlesex is a predominantly New Jersey water utility company that was recently granted a return by the Board in its most recent rate case of 10.3 percent. Ms. Ahern's estimate for Middlesex of 12.3 percent as an investor-expected return is simply not credible.

Please note that if Ms. Ahern had not merely selected the Middlesex result, but instead used the median yield figure and median growth figure to obtain a proxy group estimate, her DCF result would be 11.0 percent. When averaged with the gas proxy group DCF estimate of about 9.0 percent, the combined water/gas DCF estimate would be about 10.0 percent.

Q. DO YOU HAVE ANY OTHER CONCERNS REGARDING HER WATER GROUP DCF STUDY?

A. Yes. The 7.5 to 8.1 percent (median or mean) long-term growth rate selected by Ms. Ahern is simply too high to be plausible as <u>long-run growth rates</u>. These are the securities analyst five-year earnings growth rates from Value Line and the Reuters survey, but to a large degree this reflects the temporary very rapid earnings growth as earnings recover from recent weak levels.[4]

It is the Value Line growth rates that "drive" her results since the Reuters growth rates average only about 6.0 percent (a figure consistent with my own DCF water group study). It is therefore useful to review the ROEs reported by Value Line for each water company for the "base" period (i.e., 2007-2009), the forecast period (i.e., 2013-2015 for the large companies) and the reported earnings retention growth rates. For this purpose I use the most recent Value Line water company reports, as published on April 23, 2010.

[4] Ms. Ahern's reliance on securities analyst growth estimates is largely unworkable for the four Value Line small companies. Value Line does not prepare long-term (five year) projections for the four small companies, and Reuters reports growth rates for only one of the small companies.

Value Line Historic and Projected ROEs

Company	2007-2009 ROE	2013-2015 ROE	Earnings Retention Growth*
American States	8.7%	10.5%	5.0%
Aqua American	9.5	14.0	7.0
California Water	9.2	11.0	6.0
Connecticut Water	9.0	--	1.9
Middlesex Water	8.1	--	3.6
SJW Corp.	7.4	--	2.7
York Water	9.1	--	1.7
Average	8.7%	--	4.0%

* Value Line Investment Survey, April 23, 2010. Earnings retention estimates are as of 2013-2015 for the three large companies and 2007-2009 for the small companies since projections are not available.

Q. WHAT DO YOU CONCLUDE FROM THIS INFORMATION?

A. While this information is for a limited group of companies and rather sketchy, it does show a pattern. During the last few years, the earned ROEs for the water companies have generally been in the 8 to 9 percent range, which is somewhat less than the authorized returns. Investors probably are expecting some improvement with future earned ROEs over the next several years, results more in line with the authorized returns. (Aqua American, however, appears to be an outlier.) This expected improvement from base period weak earnings can explain the very high 6 to 8 percent (or more) growth rates that Ms. Ahern reports. These are temporary growth adjustments, not he sustainable long-term growth rates that the DCF model requires. The sustainable growth rates are better represented by the 2013-2015 earnings retention growth, which for the three large water companies averages about 6.0 percent.

As a reality check, Ms. Ahern’s water company group growth rate of about 8 percent is nearly double the gas group growth rate (4.4 percent) and greatly exceeds the Blue Chip long-term growth rates for both the U.S. economy and corporate profits, which are in the 5 to 6 percent range.

C. Ms. Ahern's CAPM Studies

Q. HOW DID MS. AHERN OBTAIN HER CAPM RESULTS?

A. Her analysis first applies the standard CAPM formula, using the following data input parameters:

(1) Risk free rate (long-term Treasury yield): 4.62%

(2) Risk premium: 8.16%

(3) Beta: 0.80 (water) and 0.65 (gas)

These parameters produce the following results:

K_e (water) = 4.62% + 0.80 (8.16) = 11.15%

K_e (gas) = 4.62 + 0.65 (8.16%) = 9.92%

She also employs the "ECAPM" (a modified version of the CAPM), and in doing so obtains somewhat higher results, 11.56 percent for the water companies and 10.64 percent for the gas companies. The "ECAPM" version is generally not accepted for utilities by regulatory commissions and in my opinion is not warranted.

Q. WHAT IS YOUR DISAGREEMENT WITH MS. AHERN'S CAPM ANALYSIS?

A. The average of her water and gas CAPM estimates is about 10.5 percent, which is somewhat above my 10.1 percent upper bound CAPM estimate. My disagreement pertains primarily to her market risk premium of 8.16 percent. This is the result of averaging two estimates, a long-term historic measure of 6.5 percent obtained from a recent Ibbotson/Morningstar publication (a standard industry source) and a second calculation that she performed using the "Appreciation Potential" for the "median" company in the Value Line data base of 1,700 companies. This second calculation allegedly produces a market return of 14.4 percent and a 9.8 percent market equity risk premium.

This second estimate, a 14.4 percent market return and 9.8 percent equity risk premium, is for outside the range of reasonableness and must be rejected as implausibly high.

Q. WHY DO YOU OBJECT TO THIS SECOND MEASURE?

A. The task at hand is to estimate the expected return for the overall stock market (e.g., the S&P 500 or the New York Stock Exchange Composite). After all, it is the overall stock market that is used as the "baseline" for calculating the utility betas used in her CAPM study (and mine as well). Quite simply, the so-called Value Line median potential in no way measures the expected return for the overall stock market. Rather, it is merely Value Line's view of return potential for a single company (the median company) in its data base of 1,700 companies. There is no way of knowing whether this bears any relationship to the broad, capitalization-weighted stock market. In fact, it probably does not. The 14.4 percent result may or may not be a reasonable estimate for this median company (which is not identified), but it undoubtedly overstates the expected return on the stock market.

Q. WHAT CAPM RESULTS WOULD MS. AHERN HAVE OBTAINED HAD SHE USED HER HISTORIC RISK PREMIUM ESTIMATES?

A. She would have obtained far more plausible CAPM results, as follows:

Water companies:	4.62% + 0.80 (6.5)	=	9.82%
Gas companies:	4.62 % + 0.65 (6.5)	=	8.85%
Average:			**9.33%**

D. Ms. Ahern's Risk Premium Analysis

Q. HOW DID MS. AHERN OBTAIN HER RISK PREMIUM ESTIMATES?

A. Her analysis is rather complex but relies on risk premium estimates obtained from both long-run (1928-2008) market returns data and Value Line projections. She combines these risk premium estimates with prospective utility bond yields of about 6.0 percent (5.90 percent for water companies and 6.1 percent for gas companies). To obtain final risk premium results, she averages her two approaches to the risk premium methods.

The first method produces a risk premium of 5.82 percent for the water companies and 4.73 percent for the gas companies. The second method, a pure historic returns approach, obtains a risk premium estimate of 4.15 percent for both proxy groups. After averaging together the two methods, she finds a final water risk premium of 4.99 percent and a gas risk premium of 4.44 percent.

Please note that had she only used the second method (which is based on the long-term 1928-2008 average), her risk premium cost of equity would be about 10 percent. This result is because single A utility bonds today yield slightly less than 6.0 percent, i.e., about 5.8 percent. This result is consistent with my ROE recommendation, and I therefore limit my criticism to the first method, i.e., the 5.82/4.73 percent risk premium estimate.

Q. WHAT IS WRONG WITH HER FIRST RISK PREMIUM ESTIMATE?

A. This analysis makes exactly the same mistake as with her CAPM study. That is, the 5.82/4.73 risk premium estimate is partly based on the so-called Value Line median stock "appreciation potential" that she uses to produce an implausibly high and simply erroneous risk premium of about 9 percent. (The 9 percent is the supposed stock market return over and above the yield on AAA bonds, not Treasury bonds.) This result is so flawed and excessive on its face, it must be rejected as a plausible estimate of the risk premium. If the impossibly large 14.4 percent stock market return is not included in her risk premium study, then Ms. Ahern's first method would also find a risk premium of about 4 percent (averaging the water and gas results) and a risk premium cost of equity of about 10 percent.

My conclusion is that if this one rather egregious mistake is corrected, her risk premium study would support a cost of equity generally consistent with my recommendation in this case of 10.0 percent.

E. <u>The Comparable Earnings Method</u>

Q. IS THE COMPARABLE EARNINGS STUDY A USEFUL METHOD FOR ESTIMATING A COMPANY'S MARKET COST OF EQUITY?

A. No, it has nothing to do with the cost of equity. This method compiles accounting data (not market data) on the returns on equity actually earned (or projected to be earned) for a large group of non-regulated companies that Ms. Ahern purports to be comparable in risk to UWNJ. At best, this is a "fairness" argument, not a cost of equity study. That is, the comparable earnings method supposes that UWNJ should be entitled to earn returns similar to those achieved by unregulated companies.

Q. WHAT ROLE DOES THE COMPARABLE EARNINGS STUDY PLAY IN THE FINAL RECOMMENDATION?

A. Ms. Ahern obtained 13.5 percent for water companies and 21.5 percent for gas companies using this method. Neither figure is even remotely close to her recommended 11.15 percent. It should be noted that the gas company result of 21.5

percent is roughly *double* her DCF cost of equity estimate, and as a result even she is forced to reject this figure in reporting her final ROE results.

Q. WHAT ARE THE PROBLEMS WITH THIS METHOD?

A. Setting aside the problem that the comparable earnings method does not even measure the cost of equity, there are an assortment of conceptual and measurement problems that render it meaningless even as a "fairness metric." First, a company's accounting return on equity is not the return available to an investor, primarily due to the fact that stocks for unregulated companies typically sell at a large premium to book value, often several times book value. Take for example a company earning $2 per share and having a book value of $10 per share – a 20 percent return on equity. However, if the share price is $20, then someone purchasing the stock today would see $2 in earnings on a $20 investment – a 10 percent earnings return on market value. While I am not suggesting that earnings/market value equates to the cost of equity, it is apparent that earnings/book value does not and cannot measure the investor's return or compensation for investing funds in that company.

A serious measurement problem is that the accounting return on equity is distorted by historical equity write-offs taken by a company over the years. The returns measured using book value are merely reported (or projected) earnings divided by the common equity balance. But suppose in the past the company took operating losses or its accountants booked a write down to equity (e.g., the company decided to close a money losing division, took a structuring charge, made an accounting change resulting in a write off, etc.). This might not affect current earnings (or projected earnings) at all. But it would reduce the company's equity balance, perhaps substantially. Reducing book equity has the mechanical effect of inflating the reported return on equity calculation. In some cases, it can even increase the earnings as well. The issue, then, is whether it makes any sense to *increase* a utility's authorized return on equity because some unregulated companies took accounting write offs. But that perverse result is what Ms. Ahern's method produces.

A final issue concerns market power. The purpose of regulation is to prevent utilities (which are monopolies) from exercising monopoly or market power. Market power (or market imperfection) is quite common in the U.S. economy for numerous reasons, many quite legitimate – patent protection, unusually skillful management, locational advantages, product differentiation, entry barriers, etc. The presence of market power is not merely (and typically not) an antitrust issue. To the extent that it is present, it will be embedded in the earnings that Ms. Ahern reports in her comparable earnings study. And, therefore, those unregulated earnings cannot be used to establish the fair return for a utility such as UWNJ.

F. <u>Size Adjustment</u>

Q. WHAT IS MS. AHERN'S RISK ADJUSTMENT FOR SIZE?

A. She adds 0.15 percent to the gas utility result and zero to the water utility result. This obviously has a very small effect on her recommendation, but she argues that a larger adjustment could be supported. The basis of her adjustment is that UWNJ is (allegedly) smaller than her proxy water and gas companies (on average) and that small size adds to risk.

Q. IS THERE PERSUASIVE EVIDENCE OF SIZE AS A RISK FACTOR?

A. It is possible that size could be a risk factor, but only one of many. It is not clear why size should be the *only* risk factor considered in this case for setting UWNJ's cost of equity. Unfortunately, the evidence that Ms. Ahern presents concerning the size/risk relationship is not very persuasive because it is based primarily on historic market returns for unregulated companies. There are reasons why size may matter for unregulated companies but have little or no importance for regulated utilities. For example, for non-regulated companies size may simply be a proxy for "maturity" or lack of growth. That is, rapidly growing or start-up companies tend to be relatively risky <u>and</u> relatively small. Larger companies, by comparison, in general are also stable companies merely do to their age. While this is interesting (and possibly spurious), it has very little to do with utilities.

Q. ARE THERE ANY OTHER CONSIDERATIONS?

A. Yes. For risk evaluation purposes, UWNJ should not be viewed as a "small company" because it is a segment of United Water, Inc., a vastly larger water company operating in 20 states. For example, United Water could organize itself as being a single company in which case it would be larger, not smaller than the average of the proxy companies. Instead, it is organized as a holding company with numerous operating subsidiaries, with UWNJ being just one. UWNJ is *not* entitled to a return on equity premium (even a small one) just because United Water's parent company has selected the holding company form of corporate organization.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, it does.

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BEFORE THE STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES
OFFICE OF ADMINISTRATIVE LAW

I/M/O THE PETITION OF	)	
UNITED WATER NEW JERSEY, INC.	)	**BPU DKT. NO. WR09120987**
FOR APPROVAL OF INCREASED RATES	)	**OAL DKT. NO. PUCRL-01200-2010N**
FOR WATER SERVICE AND OTHER	)	
TARIFF CHANGES	)	

SCHEDULES ACCOMPANYING THE TESTIMONY OF MATTHEW I. KAHAL

ON BEHALF OF THE

NEW JERSEY DEPARTMENT OF THE PUBLIC ADVOCATE
DIVISION OF RATE COUNSEL

STEFANIE A. BRAND, ESQ.
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Filed: JUNE 8, 2009

UNITED WATER NEW JERSEY, INC.

Pro Forma Rate of Return Summary at
July 31, 2010
Excluding Short-Term Debt

Capital Type	Balance[1] (Thousands $)	% of Total	Cost Rate	Weighted Cost
Long-Term Debt	$351,590	45.85%	5.57%[2]	2.55%
Preferred Stock	9,000	1.17	4.70[1]	0.06
Short-Term Debt	0	0.00	0.0	0.00
Common Equity	406,208	52.97	10.00	5.30
Total	$766,798	100.00%	--	7.91%

[1] Source: Response to RCR-ROR-27 (actual at March 31, 2010). Capitalization is New Jersey/New York consolidated.

[2] Source: Response to RCR-ROR-28 (actual at March 31, 2010).

UNITED WATER NEW JERSEY, INC.

Rate of Return Summary at
Pro-Forma at July 31, 2010
Including Short-Term Debt

Capital Type	Balance[1] (Thousands $)	% of Total	Cost Rate	Weighted Cost
Long-Term Debt	$351,590	41.52%	5.57%[1]	2.31%
Preferred Stock	9,000	1.06	4.70[1]	0.05
Short-Term Debt[2]	80,000	9.45	2.0	0.19
Common Equity	406,208	47.97	10.0	4.80
Total	$846,798	100.00%	--	7.35%

(1) See page 1 of this schedule.

(2) Source: Page 3 of Schedule MIK-1. $80 million appears to be a representative level of short-term debt. Cost rate of 2.0% is based on expectations of an increase in 2011 compared to current levels.

(3) Response to RCR-ROR-28, actual embedded cost of debt at March 31, 2010.

UNITED WATER NEW JERSEY, INC.

Short-Term Debt Balances and Cost Rates for
April 2009 – March 2010
(Thousands $)

	Balance	Interest Rate
April 2009	$128,453	1.70
May	130,000	1.52
June	130,000	1.36
July	121,613	1.01
August	80,484	1.12
September	85,133	1.11
October	88,710	1.09
November	84,333	1.06
December	83,387	1.06
January 2010	80,194	1.04
February	81,125	1.17
March	70,499	1.18
Average	**$ 96,994**	**1.20%**

Source: Response to RCR-ROR-30. Figures are for consolidated New Jersey/New York.

UNITED WATER NEW JERSEY, INC.

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

UNITED WATER NEW JERSEY, INC.

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

UNITED WATER NEW JERSEY, INC.

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

UNITED WATER NEW JERSEY, INC.

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

UNITED WATER NEW JERSEY, INC.

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*

UNITED WATER NEW JERSEY, INC.

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 averages 48.3 percent.

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

UNITED WATER NEW JERSEY, INC.

List of the Water Utility Proxy Companies

	Company	Safety Rating	Financial Strength	Beta	2009 Common Equity Ratio*
1.	American States Water	3	B++	0.80	54.1%
2.	Aqua American	3	B+	0.65	44.4
3	California Water	3	B++	0.75	52.9
4.	Connecticut Water	2	B+	0.80	49.0
5.	Middlesex Water	2	B+	0.75	52.0
6.	SJW Corporation	3	B+	0.95	51.0
7.	York Water	3	B+	0.65	54.0
	Average	**2.7**	**--**	**0.76**	**51.1%**

* The common equity ratio excludes short-term debt (and current maturities of long-term debt). Actual year-end 2009 equity ratio including short-term debt and current maturities is 44.0 percent.

Source: *Value Line Investment Survey,* April 23, 2010.

UNITED WATER NEW JERSEY, INC.

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[2]
4. Total Return ((2) + (3))	9.4 - 9.9%
5. Flotation Adjustment	0.00%
6. Cost of equity ((4) + (5))	9.7%
Recommendation	**10.0%**

[1] Schedule MIK-4, page 2 of 4.

[2] Schedule MIK-4, page 3 of 4.

UNITED WATER NEW JERSEY, INC.

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.

UNITED WATER NEW JERSEY, INC.

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).

UNITED WATER NEW JERSEY, INC.

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.

UNITED WATER NEW JERSEY, INC.

DCF Summary for
Water Utility Proxy Group

1. Dividend Yield (October 2009 – March 2010)	3.53%(1)
2. Adjusted Yield ((1) x 1.0325)	3.6%
3. Long-Term Growth Rate	6.0 - 7.0%(2)
4. Total Return ((2) + (3))	9.6 - 10.6%
5. Flotation Adjustment	0.0%
6. Cost of Equity ((4) + (5))	10.1%
Recommendation	**10.0%**

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

(2) Schedule MIK-5, page 3 of 4.

UNITED WATER NEW JERSEY, INC.

Dividend Yields for the Water
Utility Group
(October 2009 – March 2010)

	Company	October	November	December	January	February	March	Average
1.	American States	3.1%	3.1%	2.9%	3.1%	3.2%	3.0%	3.07%
2.	Aqua American	3.8	3.6	3.3	3.5	3.4	3.3	3.48
3.	California Water	3.2	3.2	3.2	3.3	3.3	3.2	3.23
4.	Connecticut Water	4.1	4.0	3.7	4.1	4.0	3.9	3.97
5.	Middlesex Water	4.7	4.5	4.1	4.2	4.4	4.2	4.35
6.	SJW Water	3.0	3.1	2.9	3.1	3.0	2.7	2.97
7.	York Water	3.6	3.5	3.5	3.9	3.8	3.7	3.67
	Average	**3.64%**	**3.57%**	**3.37%**	**3.60%**	**3.58%**	**3.43%**	**3.53%**

Source: Standard & Poors *Stock Guide,* November 2009 – April 2010.

UNITED WATER NEW JERSEY, INC.

Projection of Earnings Per Share
Five-Year Growth Rates for the
Electric Company Proxy Group

	Company	Value Line	First Call	Zacks	CNN	Average
1.	American States	6.5%	4.0%	4.0%	4.0%	4.63%
2.	Aqua American	11.5	8.3	8.4	9.5	9.43
3.	California Water	6.5	6.0	6.7	8.0	6.80
4.	Connecticut Water*	--	15.0	--	--	15.0
5.	Middlesex Water*	--	8.0	--	8.0	8.0
6.	SJW Water*	--	10.0	--	9.0	9.5
7.	York Water*	--	6.0	6.0	6.0	6.0%
	Average	**8.17%**	**8.19%**	**6.27%**	**7.42%**	**8.48%**
	Average for large companies	**8.17%**	**6.10%**	**6.37%**	**7.17%**	**6.95%**

Source: *Value Line Investment Survey*, April 23, 2010. First Call is from Yahoo Finance website (April 2010), and Zacks is from MSN Money website (April 2010), and CNN figures are from CNNfn website (April 2010).

*Please note that Value Line does not prepare projections of earnings for the small water companies.

UNITED WATER NEW JERSEY, INC.

Other *Value Line* Growth Measures
For the Water Utility Proxy Group

	Company	Dividend Per Share	Book Value Per Share	Earnings Retention
1.	American States	3.0%	3.5%	5.0%
2.	Aqua American	5.5	4.5	7.0
3.	California Water	1.0	3.0	6.0
	Average	**3.17%**	**3.67%**	**6.00%**

Source: *Value Line Investment Survey*, April 23, 2010. The earnings retention figures are for the time period 2013-2015. Projections are not available for the small companies, i.e., Connecticut Water, SJW, Middlesex and York.

UNITED WATER NEW JERSEY, INC.

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 = 0.71 (Source: page 3 of this schedule)

C. Model Calculations

Low end:	K_e = 4.5% + 0.71 (5.0) = 8.1%
Midpoint:	K_e = 4.5% + 0.71 (6.5) = 9.1%
Upper End:	K_e = 4.5% + 0.71 (8.0) = 10.2%

UNITED WATER NEW JERSEY, INC.

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.

UNITED WATER NEW JERSEY, INC.

Beta Statistics for Proxy Companies

Company	Value Line	Yahoo Finance	MSN Money	Average
Gas Utilities				
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	0.65	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**
Water Companies				
American States	0.80	0.30	0.39	0.50
Aqua American	0.65	0.14	0.21	0.33
California Water	0.75	0.26	0.38	0.46
Connecticut Water	0.80	0.37	0.41	0.53
Middlesex Water	0.75	0.35	0.42	0.52
SJW Corporation	0.95	0.50	0.74	0.73
York Water	0.65	0.52	0.61	0.59
Average	**0.76**	**0.35**	**0.45**	**0.52**
Overall Average	**0.71**	**0.33**	**0.39**	**0.48**

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

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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

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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

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61.	870832 March 1988	Columbia Gas of Pennsylvania	Pennsylvania	Office of Consumer Advocate	Rate of Return
62.	8063 Phase II July 1988	Potomac Electric Power Company	Maryland	Power Plant Research Program	Power supply study
63.	8102 July 1988	Southern Maryland Electric Cooperative	Maryland	Power Plant Research Program	Power supply study
64.	10105 August 1988	South Central Bell Telephone Co.	Kentucky	Attorney General	Rate of Return, incentive regulation
65.	00345 August 1988	Oklahoma Gas & Electric Company	Oklahoma	Smith Cogeneration	Need for power
66.	U-17906 September 1988	Louisiana Power & Light Company	Louisiana	Commission Staff	Rate of Return, nuclear power costs Industrial contracts
67.	88-170-EL-AIR October 1988	Cleveland Electric Illuminating Co.	Ohio	Northeast-Ohio Areawide Coordinating Agency	Economic impact study
68.	1914 December 1988	Providence Gas Company	Rhode Island	Commission Staff	Rate of Return
69.	U-12636 & U-17649 February 1989	Louisiana Power & Light Company	Louisiana	Commission Staff	Disposition of litigation proceeds
70.	00345 February 1989	Oklahoma Gas & Electric Company	Oklahoma	Smith Cogeneration	Load forecasting
71.	RP88-209 March 1989	Natural Gas Pipeline of America	FERC	Indiana Utility Consumer Counselor	Rate of Return
72.	8425 March 1989	Houston Lighting & Power Company	Texas	U.S. Department of Energy	Rate of Return
73.	EL89-30-000 April 1989	Central Illinois Public Service Company	FERC	Soyland Power Coop, Inc.	Rate of Return
74.	R-891208 May 1989	Pennsylvania American Water Company	Pennsylvania	Office of Consumer Advocate	Rate of Return

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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	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

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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)

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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

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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

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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

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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

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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