STATE OF NEW HAMPSHIRE
PUBLIC UTILITIES COMMISSION

DG 08-009

ENERGYNORTH NATURAL GAS, INC. D/B/A NATIONAL GRID NH

Notice of Intent to File Rate Schedules

Order Granting Delivery Rate Increase

O R D E R N O. 24,972

May 29, 2009

APPEARANCES: Steven V. Camerino, Esq., of McLane, Graf, Raulerson, and Middleton, and Thomas P. O'Neill Esq., Senior Counsel, and Ronald Gerwatowski, Deputy General Counsel for National Grid, on behalf of EnergyNorth Natural Gas, Inc. d/b/a National Grid NH; Rorie E.P. Hollenberg, Esq. and Meredith A. Hatfield, Esq., of the Office of Consumer Advocate, on behalf of residential utility ratepayers; Daniel Feltes, Esq. and Alan Linder, Esq., of New Hampshire Legal Assistance, on behalf of Pamela Locke; and Edward N. Damon, Esq. for the Staff of the Public Utilities Commission.

I. PROCEDURAL HISTORY

On February 25, 2008, EnergyNorth Natural Gas, Inc. d/b/a National Grid NH (National Grid NH or the Company) filed a request to implement new natural gas service delivery rates. The Company is a public utility that distributes natural gas in 29 cities and towns in southern and central New Hampshire and the City of Berlin; its delivery revenue requirement was last changed in 1993. The filing was accompanied by the direct testimony of Nickolaus Stavropolous, John E. O'Shaughnessy, Ann E. Leary, Susan L. Fleck, Gary Bennett, Gary L. Goble, Paul R. Moul, and Paul M. Normand. The Company also requested permission to charge temporary rates pursuant to RSA 378:27, effective with service rendered on and after August 24, 2008. In addition, National Grid NH requested a waiver of certain provisions of N.H. Code Admin. Rules Puc 1604.01(a). On February 28, 2008, the Office of Consumer Advocate (OCA) filed notice of its participation on behalf of residential ratepayers consistent with RSA 363:28. On March 14,

2008, the Commission issued Order No. 24,830, suspending the tariffs included in the Company's filing and scheduling a prehearing conference for April 9, 2008.

Intervention requests were filed by Robert Giordano, Pamela Locke by New Hampshire Legal Assistance, and Unitil Energy Systems, Inc. (Unitil). National Grid NH filed an objection to Robert Giordano's intervention request on April 9, 2008. At the prehearing conference, the Commission granted the intervention requests but held Mr. Giordano's intervention request in abeyance pending clarification of his position. On April 18, 2008, Staff proposed a procedural schedule that was subsequently approved by the Commission, as were several later requests to revise the procedural schedule. On April 23, 2008, National Grid NH filed supplemental direct testimony of Gary L. Goble. On May 20, 2008, Staff recommended that the Commission accept the withdrawal of Mr. Giordano's intervention request.

On July 22, 2008, National Grid NH filed the direct testimony of Company witness Ann E. Leary and Commission Staff member Stephen P. Frink in support of a settlement on temporary rates. A hearing on temporary rates was held on August 5, 2008. On August 18, 2008, the Commission issued Order No. 24,888, approving the settlement regarding temporary rates.

On October 31, 2008, direct testimony was filed by the following persons: Roger D. Colton on behalf of Pamela Locke; Lee Smith and Arthur Freitas of La Capra Associates and OCA analyst Kenneth E. Traum on behalf of the OCA; and George R. McCluskey, James J. Cunningham, Jr., Pradip K. Chattopadhyay and Stephen P. Frink for Staff. On December 15, 2008, National Grid NH filed the rebuttal testimony of Paul R. Moul, Paul M. Normand, Gary Bennett, John O'Shaughnessy and William Richer, Gary L. Goble, Ann E. Leary, and Nickolas Stavropolous.

On January 23, 2009, Staff filed the final report of the Monticello Consulting Group regarding a recommended bad debt percentage for the Company, and a partial settlement agreement executed on behalf of the Company, OCA, Pamela Locke, and Staff. This agreement provided for the settlement of all the issues in the case except for the return on equity allowable on the Company's common equity, and included agreements regarding a number of issues in other pending dockets. On January 26, 2009, the OCA filed the revised testimony of Kenneth E. Traum.

A hearing on the partial settlement agreement and the return on equity issue was held on January 28 and 29, 2009, following which several record requests were filed with the Commission. On February 20, 2009, post-hearing briefs were filed by National Grid NH, OCA, Pamela Locke and Staff. On February 25, the Company filed a letter clarifying that it was not seeking or expecting an order from the Commission prior to the end of February.

II. PRE-SETTLEMENT POSITIONS

A. National Grid NH

The Company initially sought a rate increase to address an annual revenue deficiency of approximately $9.9 million on a rate base of approximately $148 million, providing for an overall rate of return of 9.26%. In Mr. Gobles' supplemental testimony regarding the Company's cash working capital requirements for both the delivery and supply functions, the Company added cash working capital related to delivery functions and recommended an increase in total cash working capital, resulting in an overall requested revenue increase to approximately $10.1 million. The Company stated that since its delivery rates were last changed in 1993, it has been able to maintain its rates through sales growth, merger synergies and cost reductions. During the same period, however, prices have increased as a result of inflation, average use per

customer has declined as a result of customer conservation and energy efficiency improvements, and, from 2001-2007 alone, the Company has invested approximately $62 million in non-growth related capital projects designed to improve the reliability and safety of the distribution system. According to the Company, these factors have caught up with the Company and eroded its rate of return, which was 3.94% for the test year ended June 30, 2007, well below the last allowed overall return of 9.83% and the 9.26% overall return initially proposed by the Company.

National Grid NH considered including a revenue decoupling feature in its filing but decided that it would be premature to do so. Instead, the Company proposed a rate design setting the customer charge for each rate class closer to the marginal cost to serve the class and reducing the variable charges associated with the head and tail block charges. Since delivery rates primarily cover fixed costs that are incurred regardless of the level of consumption and variable commodity charges make up approximately 70% of a customer's total bill, the Company still expected conservation to result in significant savings to the customer. The Company also stated that it intended to continue KeySpan's leadership in providing world-class energy efficiency programs and services.

The Company's filing included a reconciliation adjustment mechanism for its pension and other post-retirement benefits (OPEB). In support, the Company stated that this mechanism will allow it to recover its actual pension costs and benefit customers by ensuring that an inappropriately high level of pension-OPEB expense is not locked into base rates. In addition the Company's filing addressed its 2.54% three-year historical average bad debt percentage, a level that the Company recognized was higher than many other gas companies in the Northeast. Finally, the Company stated that its filing fully complies with the provisions of the Energy North Merger Rate Agreement approved by the Commission in *National Grid plc*, Order No. 24, 777,

92 NH PUC 279 (2007). In rebuttal testimony, the Company increased its proposed revenue requirement to approximately $11 million based on certain audit adjustments agreed to by the Company and Staff and the Company's updated cost of equity recommendation made by Paul Moul.

B. Office of Consumer Advocate

The OCA recommended a number of adjustments to the Company's filing, including the weather normalization adjustment, depreciation study, incentive compensation and gain sharing costs, promotional advertising and related activities, merit increase effective June 29, 2008, health and hospitalization costs, the calculation of rate base, and bad debt and collection practices. In addition, the OCA was concerned that the proposed pension-OPEB reconciliation mechanism would unfairly shift all the risk associated with pension-OPEB costs to ratepayers and create a disincentive for the Company to exert care and caution with respect to these costs. Accordingly, the OCA recommended that the Commission reject the proposed pension-OPEB reconciliation mechanism.

Regarding the Company's proposed service and main extension policy, the OCA stated that the subsidization of new service lines by existing customers is inappropriate but it would also be inappropriate for new customers to subsidize existing customers through contributions for extensions. The OCA recommended that a new customer's contribution be determined through a somewhat different analysis than that proposed by the Company, so as to allow the Company to earn a return on its investments for adding new customers which approximates the cost of capital determined to be appropriate by the Commission for revenue requirement purposes.

C. Pamela Locke

Testimony by Roger Colton on behalf of Pamela Locke argued that the Company's proposed rate structure involving its customer charge and rate spread be modified, the Company's R-4 low income discount rate be strengthened, and the Company's collection plan be disapproved, with funding proposed for the implementation of that plan removed from the revenue requirement. Other testimony by Lee Smith and Arthur Freitas argued that National Grid NH's proposed method of allocating delivery service costs to customers was inappropriate because the Company had not performed an allocated embedded cost of service study to be used as the basis for cost allocation across classes and because the Company's marginal cost study contained a number of errors, and therefore there should be no changes to the allocation of delivery service costs.

D. Staff

Based on its proposed adjustments to the Company's filing, Staff recommended an increase in the Company's revenue requirement of approximately $1.7 million[1] on a rate base of almost $141 million, providing for an overall rate of return of 8.02%. Staff also recommended that the Commission: withhold judgment on eliminating 280-day and interruptible sales service and changing the service and main extension policy; approve the other proposed tariff changes; and reject the proposed pension-OPEB mechanism.

III. PARTIAL SETTLEMENT AGREEMENT

In previous orders, the Commission approved a debt to equity ratio of 50:50 for determining the Company's authorized overall rate of return and a weighted average cost of debt at 7.02% for purposes of this proceeding. Because Staff and the parties did not agree upon a

[1] This figure did not reflect the impact of Staff's recommendation regarding the Company's bad debt percentage and cash working capital requirement on the gas supply costs recovered through the Company's cost of gas mechanism.

recommended allowed return on equity (ROE) in this proceeding, they did not recommend an overall weighted average cost of capital to be applied for purposes of determining the Company's delivery rates and indirect gas costs.

The parties to the partial settlement agreed as follows:

The return on equity determined by the Commission will be used to determine the Company's authorized overall rate of return, which will in turn be applied to the ratemaking components stipulated to for purposes of determining the Company's delivery service revenue requirement and indirect gas costs. Although only the Company's delivery rates are being established in this proceeding, Staff and the parties intend that the Company's indirect gas cost rate components also be determined in this proceeding for use in determining cost of gas rates beginning with the Company's off-peak 2009 cost of gas filing, with rates effective May 1, 2009. To distinguish between delivery rates and cost of gas rates, the Company's agreed upon rate base, operating expenses and other relevant ratemaking components have been allocated between delivery service and supply service. For purposes of illustration only, Staff and the parties included in two appendices to the agreement calculations of the Company's delivery revenue requirement and indirect gas costs (based on test year direct gas costs) using the return on equity set forth in the Company's and the Staff's testimony in this case.

Delivery Rates

Pro forma test year amounts are as follows:

Rate Base--$140,239,771;

Firm Revenues--$42,224,238;

Operating Income (after federal and state taxes)--$9,702,677; and

Tax Factor—1.6814.

Cost of Gas Rates

The indirect gas costs to be used in the Company's cost of gas proceedings will be as follows, with the amounts for cash working capital and the allowance for bad debt to be determined consistent with the terms of the partial settlement agreement, but based upon the applicable gas costs in each cost of gas proceeding:

a. Production and Storage Costs—to be determined as set forth in Appendices 1 and 2. The rate of return to be applied to the investment in Production and Storage will be determined using the return on equity determined by the Commission in this proceeding.

b. Cash Working Capital—to be determined as set forth in Appendices 1 and 2. The rate of return to be applied to cash working capital for supply purposes will be the rate of return established in DG 07-072.

c. Miscellaneous Overhead—to be determined as set forth in Appendices 1 and 2. The rate of return to be applied to the investment relating to Miscellaneous Overhead will be determined using the return on equity determined by the Commission in this proceeding.

d. Allowance for Bad Debt—see below

To recover the supply-related portion of its uncollectible accounts, the Company is allowed to include in its cost of gas a percentage of its gas supply-related costs, referred to as the supply-related bad debt percentage. The Company will use the following supply-related bad debt percentages, effective with its cost of gas filing for the off-peak 2009 period, to determine its allowance for supply-related bad debt.

May 2009 – April 2010	2.54%
May 2010 – April 2011	2.40%
May 2011 – April 2012	2.00%
May 2012 – April 2013	1.75%

The foregoing supply-related bad debt rates will not be adjusted prior to or after April 2013, whether for purposes of determining the Company's cost of gas rates or otherwise, unless and until a different bad debt rate is determined by the Commission as part of a base rate proceeding, at which point the rate determined by the Commission shall apply.

Depreciation

The Company will use the depreciation accrual rates and related depreciation and amortization expense proposed in its filing in this proceeding, with the following modifications:

a. Depreciation accrual rate for the Services Account 359 will be 4.00%;

b. Net salvage rate for the Services Account 359 will be negative 60%; and

c. Depreciation reserve surplus amount is $12,401,522 and the annual amortization is $933,588.

The depreciation rates to be used are set forth in an appendix.

In addition, the Company will: (i) utilize vintage year accounting for all plant accounts (except low dollar value, high volume plant accounts) on a going-forward basis when sufficient data is available, (ii) adopt a first in first out accounting policy when such data is not available, and (iii) segregate Mains Account 356 and Services Account 359 by type of material (i.e., plastic, etc.) on a going-forward basis. In its next delivery rate case, the Company will submit a depreciation study performed no more than five years prior to the filing of such case.

Lead/Lag Study

The Company will perform a lead/lag study on purchased gas costs every three years for purposes of adjusting the Company's cash working capital allowance included in its cost of gas rates. No other component of the Company's rates will be adjusted based on the results of the study except in a general rate case or as otherwise be determined by the Commission. The first

study will be prepared using data for the twelve months ending October 31, 2011 and will be submitted to the Commission with the Company's off-peak 2012 cost of gas filing. The results of the lead/lag study, as approved by the Commission, will be used to establish the off-peak 2012 cost of gas rates; provided that if the Company files an intervening base rate case, the study prepared for the base rate case will be reviewed in that proceeding and the three-year schedule will be reset accordingly. In preparing the lead/lag study, the Company will use the same methodology used in DG 07-050, modified to use the accounts receivable turnover method to calculate the collections lag component of its revenue lag as was done for this proceeding. Finally, the reasonable costs of such study and any other reasonable costs of any Commission investigation of such study over and above the usual costs attributable to a routine cost of gas proceeding will be recovered through rates through the Company's local distribution adjustment charge.

Rate Design

Rate design is based on the following principles:

While not all parties agreed that marginal costs should be used to allocate class revenue requirements or design rates, rate design in this case will more closely approximate the marginal costs to serve as calculated by the Company.

Rate class revenue targets will be capped at 112.5% of the overall Company average delivery rate increase, but in no case shall a rate class receive a decrease.

Volumetric charges for R-3 (residential heating) and R-4 (residential heating discounted rate) will be designed to reduce the current declining block price differential by half.[2] For all other classes, volumetric charges will be adjusted proportionately to achieve the class revenues targets, except R-1 non-heating residential, where the block differential will be eliminated and replaced with a flat volumetric rate. All customer charges will be increased by no more than approximately 45%, but in no event should any customer charge be higher than the customer cost to serve.

[2] This change will reduce the rate impact disparity between customers who are lower than average users and customers who are higher than average users that resulted from the Company's initial rate design proposal.

> For illustrative purposes, summaries of the proposed delivery rates and reports of proposed rate changes, including overall class percentage increases at both the Staff's recommended 9.01% proposed return on equity and the Company's recommended 12.25% proposed return on equity were provided in two appendices. In designing the approved delivery rates, the Company will prorate all rate components (customer charge, head block, and tail block rates) based upon percent variance between the proposed distribution class revenue targets contained in Appendices 4 and 5 and the final approved class distribution revenue targets.

In addition, the Company will meet with Staff and the parties during the summer of 2009 to discuss whether the R-4 discount level (currently, a 60% discount to the R-3 delivery rate) should be increased. The parties anticipate that the discussions will include representatives from Northern Utilities, Inc. Staff will convene and facilitate these discussions. The Company will also meet with Staff and the parties during the spring of 2009 to discuss its outreach plan for informing customers and state and local agencies, and other public and private organizations, such as the Community Action Agencies, of the R-4 discount rate, and possible enhanced outreach to R-3 customers concerning the R-4 rate. Staff will convene and facilitate these discussions as well.

Enhanced Collections Efforts

As part of its efforts to manage collection lag and uncollectible account expense, in its next fiscal year the Company will increase its collections staffing above current levels and will begin implementing measures designed to reduce its bad debt rate. While the parties and Staff understand that such efforts may initially cause the bad debt ratio to increase, as additional accounts are written off they are expected ultimately to lower the Company's bad debt rate.

The Company will meet with New Hampshire Legal Assistance by May 1, 2009 to discuss the Company's collection activities and uncollectibles rate. The Company will consider suggestions offered by New Hampshire Legal Assistance and its expert witness pertaining to the above; however, the Company retains its discretion with respect to its collection activities. The

Company will notify Staff and the OCA of the scheduling of the above discussions and will invite Staff and OCA to participate.

Tariff Language/Provisions

Changes relating to the tariff language and provisions addressed by the Company's initial filing, as follows:

i. Main extension policy—The Company may modify its existing main extension policy to eliminate the provision for extensions of 80 feet or less at no charge to the customer by deleting Section 7(B) of NHPUC No. 5 and amending Section 7(C) so that it applies to all customers. In all other respects, the main extension policy will remain unchanged. Sample revised tariff language is attached as an appendix.

ii. G-63 and G-54 Classes—The Company's G-63 and G-54 classes of service will be combined into a single class of service, consistent with the proposal in the Company's initial filing.

iii. Bad Check Charge—The Company may increase the bad check charge provided for in its tariff from $5 to $15.

iv. Service Agreements—The Company may remove the 280-day and interruptible transportation service agreements from its tariff, consistent with the proposal in its initial filing.

v. Name—The Company's tariff will be updated to reflect the name National Grid NH on a consistent basis throughout.

vi. Unauthorized Gas Use—The Company may increase the penalty for unauthorized volumes of gas taken by a customer during periods of supply and capacity curtailment from $1.50 per therm to five times the daily index, as defined on page 94 of the tariff, as described in the Company's initial filing.

vii. 280-Day/Interruptible Sales—The Company withdraws its request to eliminate 280-day/interruptible sales service. If the Company wishes to renew this request, it will include the request in its next integrated resource plan filing with the Commission or as otherwise agreed with Staff.

viii. R-1 Availability Clause—The Company may modify the availability clause for service to the R-1 class to read as follows: "This rate is available to all residential customers who do not have gas space heating

> equipment, who consume less than 80% of their annual usage in the six winter months of November though April and whose monthly usage does not exceed 100 therms in any winter month."

Other Dockets

The Company, Staff and the OCA also agreed upon a settlement of all issues in two pending dockets to which the Company is a party, DG 07-050 (Accrual Accounting) and DG 07-072 (Carrying Charge Rate for Cash Working Capital). Those settlements will be documented and filed in the respective dockets following Commission approval of the settlement in this docket.

Rate Recoupment/Rate Case Expense

Any difference between the delivery revenues obtained from the rates prescribed in the temporary rate order, Order No. 24,888, and the delivery revenues which would have been obtained under the rates finally determined, if applied during the period such temporary rate order was in effect, will be recovered from, or returned to, customers on a volumetric basis across all current rate classes based on the Company's currently effective rate design, over a period of six months and net of approved rate case expenses. The net surcharge or credit will be included in the Company's local distribution adjustment charge. The Company will submit an accounting of its rate case expense, with appropriate supporting documentation, for review by Staff and the OCA upon the conclusion of this proceeding.

IV. POSITIONS OF THE PARTIES AND STAFF REGARDING PARTIAL SETTLEMENT AGREEMENT AND RETURN ON EQUITY

A. National Grid NH

The Company joined the other parties in urging the Commission to approve the partial settlement agreement, noting that this case involved review of a large number of issues related to rate base and operating expenses. The Company noted the Commission's preference for

negotiated resolutions, and the fact that the parties were able to settle not just the instant base rate case (apart from the ROE issue) but two other complex dockets as well. The Company also noted that the partial settlement agreement reflects the Company's weighted average cost of debt (7.02%) and the capital structure (50:50 debt to equity ratio) to be used pursuant to prior settlements approved by the Commission in calculating the return on rate base.

The Company's cost of equity expert, Paul R. Moul, employed four methods for measuring the cost of equity: the Discounted Cash Flow (DCF) model, the Risk Premium (RP) analysis, the Capital Asset Pricing Model (CAPM), and the Comparable Earnings (CE) approach. Because the result of the CE approach is principally determined by the business cycle, rather than by the fundamentals present in the stock and bond markets, the Company did not rely on the result of the CE approach in making its cost of equity recommendation. Rather, it averaged the results of the other three market model approaches before making a point cost of equity recommendation.

The Company presented its results and its rationale in two sets of testimony, direct testimony filed on February 25, 2008 and rebuttal testimony filed on December 15, 2008. In each case, the Company employed the same methods and sources and kept the same proxy group. Day 1 Transcript (Tr.) at 65; Exhibit 33 at 4.[3] Since the direct testimony was based on market evidence through 2007 year end and the rebuttal testimony on more current information, the results differed. In its direct testimony, the Company recommended a return on common equity of 11.50% and recommended a return of 12.25% in its rebuttal testimony. The Company attributed the increase in the recommended return to changed circumstances, particularly the turmoil in the capital markets. See Exhibit 33 at 27.

[3] The page number(s) of exhibits cited herein refer to the sequentially numbered page(s), when applicable.

In the Company's view, exclusive reliance on the DCF is inappropriate because of its flaws and limitations and the other three methods, RP, CAPM and CE, are more reliable indicators of the cost of equity in the present environment. Exhibit 9 at 5-5A. The Company asserted in addition that the DCF model produces a result that is significantly different than the other methodologies. *Id*. at 5A.

The models were applied with market and financial data developed for a proxy group of 7 companies. The proxy group consisted of companies that: (i) are engaged in the natural gas distribution business, (ii) have publicly traded common stock, (iii) are contained in The Value Line Investment Survey, (iv) are not currently the target of a merger or acquisition, (v) operate with a weather normalization and/or decoupling feature, and (vi) have at least 60% of their assets subject to utility regulation. The Company used average data for the proxy group rather than individual company analysis because, it said, the determination of the cost of equity for an individual company has become increasingly problematic. Exhibit 9 at 6. According to the Company, the use of group average data helped minimize the effect of extraneous influences on the market data for an individual company. *Id*.

The Company reviewed several qualitative factors bearing upon investors' assessment of overall risk, namely, competition in the natural gas business, the Company's throughput to large users, and its construction program. In addition, it performed a fundamental, quantitative risk analysis with respect to financial data comparing the Company, the S & P Public Utilities, and the proxy companies before concluding that, on balance, the cost of equity for the chosen proxy group would provide a reasonable basis for measuring the Company's cost of equity in this case.

DCF Model: The Company used a single-stage DCF approach. The dividend yield component was determined as a six-month average dividend yield for the Company's proxy

group, adjusted to reflect the prospective nature of dividend payments by averaging three adjusted values. In determining the growth component, the Company considered a number of growth rate indicators but relied on three-year forecasts of earnings per share growth issued by IBES/First Call, Zacks, Reuters and Value Line in choosing an investor-expected growth rate near the midpoint of the array of earnings per share forecasts. Exhibit 9 at 22.

Next, the Company applied a leverage adjustment. According to the Company, when regulators rely on the results of the DCF (which is based on the market price of the stock of the proxy group companies) and those results are used to compute the weighted average cost of capital with a book value structure, the results will not reflect the degree of financial risk associated with the capital structure shown by the market capitalization. The Company maintained that when, as here, the stock price diverges from book value, the potential exists for a financial risk difference, whereby the capitalization of a utility measured at market value contains relatively less debt and more equity than its capitalization measured at book value. *Id*. The Company insisted that its leverage adjustment deals with the issue of financial risk and is not intended to transform the DCF result to a book value return through a market-to-book adjustment. Exhibit 9 at 24. According to the Company, its leverage adjustment contains no factor for a particular market-to-book ratio; instead it merely expresses, by means of equations based on Modigliani and Miller, the cost of equity as the unleveraged return plus compensation for the additional risk of introducing debt into the capital structure. Exhibit 9 at 27.

More specifically, the Company contended that the cost of equity for the Company's proxy group related to its relatively lower common equity ratio at book value; using book value has higher financial risk than the relatively higher common equity ratio using market values. Because the ratesetting process utilizes the book value capitalization, it is necessary to adjust the

market determined cost of equity, upward in this case, for the higher financial risk related to the book value of capitalization. Exhibit 9 at 26.

Finally, the Company applied a flotation cost adjustment factor to the common equity cost rate in order to cover flotation costs, an adjustment that, according to the Company, should be made even when it will not be issuing common stock in the near term.[4] See Exhibit 9 at 27, 68-70. The Company's rationale for the adjustment was that the rate of return on common equity should provide for the underwriting discount and issuance expenses associated with the sale of new common stock. It said that because issuance costs are paid from the initial public offering price, it is the net proceeds that are available to the Company. To adjust for the cost of raising new common equity capital, the Company contended that the rate of return on common equity should recognize an appropriate multiple to allow for a market price of stock above book value, which is necessary in order to maintain the financial integrity of previously issued shares and to avoid dilution when new shares are issued.

In its updated rebuttal testimony, the Company used a dividend yield of 4.02%, a growth component of 5.75%, an upward leverage adjustment of 0.57% and a flotation cost multiplier of 1.02 to arrive at an indicated cost of equity of 10.55% based on the DCF approach. Exhibit 33 at 30.

RP Analysis: With this method, the cost of equity capital is determined by corporate bond yields plus a premium to account for the fact that common equity is exposed to greater investment risk than debt capital. The Company first estimated the prospective yield on long term A-rated public utility bonds with reference to Moody's index and Blue Chip forecasts and a yield spread. Exhibit 9 at 29. To determine the recommended equity risk premium, the Company computed risk rate differentials for the S & P Public Utility Index and Public Utility

[4] This adjustment is also used for purposes of the Company's CAPM model.

Bonds over four historical periods ending in 2006. The Company then averaged the risk differential data for two of those periods, 1974-2006 and 1979-2006, that fell within the bounds of the highest and lowest risk differentials to compute an estimated risk premium for the S & P Public Utilities. In order to arrive at a recommended equity premium in this case, the Company modified the computed risk differential result to recognize various differences in the fundamental risk characteristics between the S & P Public Utilities and the Company's proxy group. Exhibit 9 at 33. Finally, the Company added a flotation cost adjustment. Exhibit 9 at 34.

In its updated rebuttal testimony, the Company used a public utility bond yield of 7%, a risk premium of 5.5% and a flotation cost adder of 0.21% to arrive at an indicated cost of equity of 12.71% based on the RP approach. Exhibit 33 at 30.

CAPM: Under the CAPM, the expected rate of return on a security is determined by adding a risk-free rate of return to a risk premium which is proportional to the non-diversifiable (i.e., systematic) risk of a security. Exhibit 9 at 81. To compute the cost of equity with the CAPM, three components are necessary: a risk-free rate of return, the beta measure of systematic risk, and the market risk premium derived from the total return on the market of equities reduced by the risk-free rate of return. Exhibit 9 at 34.

The Company performed the CAPM calculation for its proxy group. It averaged the betas for the proxy group published by Value Line. The Company maintained that these betas were calculated with the market price of stock and are therefore related to market value capitalization. Contending that the betas must reflect the financial risk associated with the ratesetting capital structure measured at book value, the Company then unleveraged the Value Line betas and re-leveraged them for the book value common equity ratios using the Hamada formula.

To determine the risk-free rate, the Company used the yields on 20-year Treasury bonds using both historical and forecast data. Exhibit 9 at 36. To develop the market risk premium, the Company started from the total return on the market of equities using both forecast and historical data. Regarding the forecast data, the Company averaged (i) the Value Line forecasts of capital appreciation and dividend yield and (ii) the DCF return on the S & P Composite Index. Regarding the historical data, the Company calculated the common stock arithmetic mean returns less the government bond arithmetic mean returns as reported by Ibbotsen Associates in Stocks, Bonds, Bills and Inflation during the period 1926-2006. Exhibit 9 at 85. The Company then averaged the forecast and historical total market return data before subtracting the risk-free rate to determine the market risk premium. Finally, the Company included a size and flotation cost adjustment in its CAPM estimate. Exhibit 9 at 37-38. According to the Company, the literature supports an adjustment related to the size of the company or portfolio for which the calculation is performed, recognizing that as the size of a firm decreases, its risk, and hence its required return, increases. *Id*. at 37.

In its updated, rebuttal testimony, the Company used a risk free rate of 4.25%, a beta of 0.96, a market risk premium of 8.89%, a size adder of 0.92% and a flotation cost adder of 0.21% to arrive at an indicated cost of equity of 13.91% based on the CAPM approach. Exhibit 33 at 30.

CE Approach: With this approach, it is necessary to analyze the returns realized by other, non-regulated firms. According to the Company, because regulation is a substitute for competitively-determined prices, the returns realized by non-regulated firms with comparable risks to a public utility provide useful insight to a fair rate of return. Exhibit 9 at 38. To identify the comparable risk companies, the Company screened The Value Line Investment Survey for

Windows, using six categories of comparability designed to reflect the risk of the proxy group, namely, timeliness rank, safety rank, financial strength, price stability, Value Line betas, and technical rank. The Company used both historical realized returns and forecast returns for non-utility companies over a period of 10 years covering an average business cycle, 5 historical years and 5 forecast years. No adjustments were made because, according to the Company, the results of the comparable earnings approach can be applied directly to the book value capitalization. The Company averaged the median value for the historical rate of return on book equity and the median value for the forecast rate of return to determine the indicated cost of equity using the CE approach. See generally Exhibit 9 at 39-41. In its updated, rebuttal testimony, the Company determined 13.10% to be the result.

The Company criticized the Staff's updated ROE recommendation on a number of grounds. First, the Company charged that Staff appeared to be operating with an inherent assumption that the ROE should be relatively low. The Company argued that the Staff's witness reached the same conclusion, a low ROE, from two opposed starting points—a low return due to New Hampshire's relatively better economic conditions and a low return due to capital market turmoil driving investors to low risk equities such as public utility stocks. Exhibit 33 at 8. Based on the levels of returns established in other regulatory proceedings, the levels that investors expect natural gas utilities to achieve generally and the general state of the capital markets, the Company concluded that Staff's recommendation was incompatible with investor expectations and current market fundamentals.

As evidence for its conclusion, the Company pointed to a number of regulatory decisions from other states in which a rate of return between 10% and 11% was granted. The Company also contended that the Staff's recommendation cannot be reconciled with the Commission's

historically low equity returns. Calculating an average spread between the Commission's ROE in six prior dockets and the yields on high quality public utility bonds and considering current average yields on those bonds, the Company stated that the indicated equity return is significantly higher than that recommended by Staff.[5] In addition, the Company argued that Staff's recommendation did not reflect the increased risks of common stocks in the market, as measured by the Chicago Board Options Exchange Volatility Index. Exhibit 33 at 11 et seq.

Regarding Staff's DCF approach, the Company questioned Staff's choice of proxy group, derivation of the growth component used in applying the DCF, and failure to adjust the results for flotation costs. For example, the Company asserted that the Value Line forecasts of dividends and book value per share and internal plus external growth were suspect because they were based on the forecast of a single analyst rather than a consensus of a variety of forecasts. Exhibit 33 at 15.

The Company argued against Staff's use of dividend growth rates and in favor of using only earnings growth rates, first, because earnings are the source of dividend payments, second, with the constant price-earnings multiple assumption of DCF, the value of the firm and its stock price will grow at the earnings growth rate, and, third, because Professor Myron Gordon established that earnings forecasts are the best input. In the Company's view, since Value Line projected declining dividend payout ratios for Staff's proxy group companies, earnings per share and price appreciation, which the Company equated to the growth component, can be expected to grow at a higher rate than dividends in the future. According to the Company, the only purpose of including a dividend per share growth forecast is to suppress the other measures of growth. Regarding Staff's use of forecasts of book value per share growth, the Company stated flatly that

[5] Relying on this approach in its Post-Hearing Brief and using an average spread of 3.64% and current A-rated utility bond rates of 6.52%, the Company indicated that 10.16% would be one rough check on reasonableness. Post Hearing Brief at 25.

such forecasts are inapplicable to the DCF approach because stocks do not trade at constant market-to-book ratios.

The Company also challenged Staff's statement that, when a company's market-to-book ratio is significantly greater than one, the expected return on equity exceeds the true opportunity cost of equity. The Company explained that this is relevant to rebut Staff's assertion that granting a leverage adjustment would further encourage stock prices to deviate away from book value, at the expense of ratepayers and to the advantage of investors. The Company complained that Staff presented insufficient empirical data to support its position and maintained that original-cost regulation does not in fact create a tendency for the market value of utilities to approach their book value, even though that might be expected to occur since regulators presumably set the ROE equal to the cost of equity and apply that return to an original-cost rate base. The Company further argued that even though regulators are aware that market-to-book ratios exceed one, they continue to grant rate increases to utilities.

Finally, the Company reiterated that its leverage adjustment does not depend on establishing or targeting any particular market-to-book ratio and does not address any differences between expected returns and opportunity cost rates. Rather, according to the Company, its leverage adjustment is intended to reflect the risk related to financial leverage and it would be wrong to suggest that a market-to-book adjustment is involved in the Company's leverage adjustment. Exhibit 33 at 22.

Regarding Staff's CAPM approach, the Company stated that its adjustment for company size is justified by studies performed by Fama and French, which identified size as a separate factor that must be recognized in addition to the beta measure of systematic risk in explaining investor expected returns. The Company also claimed that Staff's use of the ten-year Treasury

note yield was too low for rate-setting purposes in view of Blue Chip forecasts showing the yield increasing in the future. According to the Company, part of the increase is attributable to the rise in yields from the depressed levels today that have arisen from the "flight to quality" during the financial crisis. In addition, the Company asserted that Staff's market return was too low as judged by Value Line forecasts of growth. Finally, the Company defended its RP approach against Staff's criticism that it is primarily dependent upon historical stock price appreciation for measuring the expected return on common equity.

In its Post-Hearing Brief, the Company stated that the Commission's determination of ROE is a signal to the Company regarding whether New Hampshire wants to encourage a continued substantial commitment to invest in the state. According to the Company, the evidence in this case undeniably shows that the cost of capital for all companies, including utilities, is increasing during a period of financial turmoil. The Company concluded that an ROE less than that being provided on average to other gas utilities, 10.4%, is not reasonable. The Company further argued that because of the impact of the Company's ROE on investor perceptions, the Commission's ruling will be viewed as a clear statement of whether the Company should continue to invest significant levels of discretionary capital in New Hampshire and that Staff's recommended ROE of 9.33% is inadequate to attract capital for this purpose and would send an unmistakable message that New Hampshire is not the place for the Company to make investments that are not absolutely required.

The Company complained that Staff's recommended ROE gave no consideration to the policy question of encouraging investment and was based almost entirely on a rote mathematical calculation, rather than with reference to knowledge about the industry or the Company that would have allowed Staff to make fully informed judgments regarding the inputs and outputs of

its models. The Company urged the Commission to apply its judgment and establish an ROE that not only reflects information from several models or sources and is more in line with other external indicators of the cost of equity and the actual opportunity cost of capital for the Company, but also takes into account the need to encourage infrastructure in New Hampshire.

Citing prior dockets in which the Commission took account of factors bearing not only on capital costs and comparable risks but their relationship to the actual circumstances of a utility whose rates are under consideration, the Company argued that its cost of equity expert demonstrated an in depth knowledge of the gas industry and the specific circumstances facing the Company, while Staff's expert was generally unfamiliar with these factors and their impact on risk. Accordingly, the Company urged that the Staff's ROE recommendation be given little or no weight.

The Company also argued that Staff's ROE recommendation relies upon a single, DCF-based method based on questionable inputs from a single analyst and then checked the results of that method against unreliable CAPM estimates. Specifically, the Company asserted that Staff's DCF model relied on projections of dividend growth and book value growth that came from a single analyst, Value Line. The Company pointed that its DCF model relied on earnings per share growth rates obtained from multiple analysts for each member of the proxy group. The Company argued, in addition, that Staff's dividend per share growth rates were clear outliers, dependent on projections of dividend payout ratios rather than actual growth of the proxy group companies.

A second methodological flaw, in the Company's view, is that the Staff failed to use a cost of equity model that more fully accounts for the effect of the current high level of market volatility on the cost of equity. The Company asserted that the DCF model is not capable of

reflecting volatility because it is always based on data from a single point in time. Finally, the Company discounted Staff's two CAPM results because of how much they changed over a short period—decreasing from 9.28% and 10.64% at the time of Staff's pre-filed testimony on October 31, 2008, to 7.08% and 8.48% at the time of hearing on January 29, 2009.

Arguing that since Staff's specific DCF approach has not been previously adopted by the Commission and is not due any special deference, and given the infirmities of the DCF model, the Company asserted that the Commission should apply more than one method to determine ROE. In addition, the Company reiterated that Staff's recommended ROE reflects a downward bias that is inappropriate during a period of significant market turmoil and generally increased risk, particularly in light of the Company's on-going capital investment program. While the Company did not dispute that utility stocks generally have lower risk and therefore a lower cost of capital when compared to the rest of the market, the Company maintained that utilities face substantially higher risk and a higher cost of capital than they do in a stable financial market. The Company concluded that the risks of utility stocks have increased relative to prior periods. According to the Company, the "flight to safety" described by Staff has largely benefited Treasury bonds, not utility stocks, whose prices have trended downward.

The Company insisted that in setting a return that is comparable to that for companies of similar risk, regulators must also consider that investors and utilities make their decisions in a world with multiple investment options, all competing for the same capital. According to the Company, relative levels of allowed returns in different jurisdictions matter because they compete for discretionary capital investments made by utility holding companies doing business in multiple jurisdictions. The Company concluded that returns available in other jurisdictions and in other companies, averaging about 10.4% in 2008, are highly relevant in determining the

cost of equity for a given utility. Nevertheless, the Company recognized that each jurisdiction must conduct its own cost of equity analysis in order to avoid circularity and ensure that the outcome has integrity.

The Company ended its arguments on ROE by stating that rather than using the DCF method to establish a point estimate, an exercise that provides a false sense of certainty and accuracy in a process requiring considerable judgment, the Commission should first determine a range of reasonable returns by reference to more than one ROE method. Within that range, the Commission has broad discretion to select an appropriate return, which it can do based on the particular economic circumstances facing the Company and the specific risk factors and level of capital investment the Company faces. Asserting that the Commission has a long history of adopting the mid-point in the range of reasonable ROEs, the Company stated that the middle of the range of the two ROE recommendations, 9.33% and 12.25%, is consistent with the returns being granted in other states while an ROE at the high end of the range of reasonableness would provide an appropriate signal of regulatory support for the Company's efforts and would continue to allow the Company to attract the capital needed to implement the Company's infrastructure replacement plans.

B. Staff

In its Post-Hearing Brief, Staff stated that the partial settlement agreement appropriately resolves all the concerns described in its direct testimony, other than the ROE issue. Staff also pointed out that the partial settlement agreement resolves the bad debt issue related to gas supply, a contentious issue carried over from prior cost of gas proceedings, by contemplating additional collection personnel and recovery of bad debt expenses substantially less than what the Company is currently experiencing, and the partial settlement agreement determines the cash working

requirement for both delivery and supply, with an updated study related to supply working capital to be filed every three years. In Staff's view, the adjustments made to rate base, revenues and expenses reflected in the partial settlement agreement are based on sound ratemaking principles and have been appropriately allocated between delivery and commodity services.

Staff pointed out that with the Company's recommended ROE, 12.25%, the partial settlement agreement would result in a revenue requirement increase, applicable to both delivery and supply service, of approximately $8.8 million, or $2.2 million less than the approximately $11 million increase requested in the Company's most recent testimony,[6] while at the Staff's recommended ROE, 9.33%, the partial settlement agreement would result in a revenue requirement increase of approximately $5.2 million. Staff stated that the partial settlement agreement reduces the rate impact on customers compared to the approximately $11 million revenue increase requested by the Company and it preserves the Commission's prerogative of establishing a reasonable ROE. Staff noted that although the contested ROE issue and the agreed-upon issues set forth in the partial settlement agreement are different, they are also inter-related since the Commission must ultimately find that the Company's rates resulting from the partial settlement agreement and the Company's ROE are just and reasonable under RSA 378:28.

Staff also provided certain information on the rate impacts resulting from the decision on ROE: compared to permanent rates previously in effect, a 9.33% ROE translates into a bill increase for a typical residential heating customer, for the delivery portion of his or her bill, of approximately 7.9% while a 12.25% ROE translates into a bill increase of approximately 16%. In dollar terms, at a 9.33% ROE, a typical residential heating customer will experience an

[6] These figures are exclusive of the revenue effects of the return on equity determination on the Capital Investment Allowance described, the Company's recovery of rate case expenses, or charge/refund resulting from the reconciliation of temporary and permanent rates.

increase in the delivery portion of his or her bill of approximately $37.50 per year, while at a 12.25% ROE, he or she will see an increase of approximately $65 per year. Including both delivery and supply, the total bill increase for a typical residential heating customer would be approximately 2.8% at a 9.33% ROE compared to approximately 5% at a 12.25% ROE.

Staff's expert cost of capital witness, Dr. Pradip Chattopadhyay, employed two primary constructs for measuring the cost of equity, the DCF method and CAPM, plus a Market-to-Book method related to the DCF approach. Staff did not utilize the RP method on grounds that it is largely based on historical data exposed to considerable subjective manipulation and is not sufficiently forward-looking. Exhibit 27 at 34. Staff also stated that the RP method is conceptually similar to CAPM. *Id*. As further described below, Staff presented several variations of the DCF and CAPM methods, and averaged the results in making a point cost of equity recommendation and identifying a range of reasonable estimates.

Staff presented its results and its rationale in pre-filed direct testimony filed on October 31, 2008, and in hearing testimony on January 29, 2009. In each case, Staff employed the same methods and sources and kept the same proxy group. Day 2 Tr. at 11. Since Staff's pre-filed testimony was based upon somewhat older market data than its hearing testimony, the results differed. In its pre-filed testimony, Staff recommended a single point estimate for ROE of 9.01%, with a reasonable range between 8.95% and 9.28%, and in its hearing testimony, Staff recommended a single point estimate for ROE of 9.33%, with a reasonable range between 8.77% and 9.33%.

Staff recommended reliance on the DCF construct for several reasons. First, in a milieu of market-to-book ratios significantly greater than one, the CAPM and RP methods, which are predominantly based on historical stock price appreciation as the basis for measuring the

expected return on common equity, produce cost of equity estimates that are higher than the true cost of equity. By contrast, the forward-looking DCF approach tends to correct somewhat for the deviation between stock prices and book values, thus producing a cost of equity estimate more in line with the true cost of equity. Staff also asserted that to the extent investors understand that a divergence in the stock price and book value is unsustainable in the long run, that understanding is reflected in the forward-looking DCF method. Staff also pointed out that the construct underlying the DCF is widely accepted and the DCF technique is one of the most popular of those currently in use. Finally, Staff cited *Public Service Company of New Hampshire*, Order No. 24,473, 90 NH PUC 230, 247 (2005), where the Commission stated that DCF has been the primary method used in New Hampshire while recognizing that other valid methods may be used as a test of reasonableness for comparison purposes, and argued that no persuasive reason appears in the record as to why the Commission's approach is still not appropriate. Post-Hearing Brief at 12. In this regard, Staff pointed out that the Company's cost of capital witness agreed that the DCF method is used in a variety of economic situations, both good and bad. *Id*. at 13.

Staff's models were applied with market and financial data developed for a proxy group of seven companies. The proxy group consisted of companies that: (i) are natural gas utilities listed in Value Line, (ii) have publicly traded common stock, (iii) have not recently omitted or cut their dividend, (iv) have not recently been the target of a merger or acquisition, and (v) have more than 85% of their assets engaged in regulated operations based on average data from 2006 and 2007. Unlike the Company, Staff did not restrict the proxy group to companies which operate with a weather normalization and/or de-coupling feature in their tariff. Staff stated that the Company does not have such features and including this as a criterion is inappropriate.

Because the Company has 100% of its assets subject to utility regulation, Staff asserted that a 60% cut off is not reasonably reflective of the realities that a completely regulated company like the Company is faced with. Four of the companies in Staff's proxy group were the same as the companies in the Company's proxy group, while three were different.

In order to assess and confirm the validity of its proxy group, Staff checked the long term S&P credit ratings of the companies and reviewed economic conditions in New Hampshire, comparing them to those of the economies associated with the jurisdictions of the proxy companies. In addition, Staff reviewed certain other financial metrics considered by the Company to be important for judging relative risk, such as operating ratios and internal generation of funds.

Staff performed individual company cost of equity analyses and used an outlier screening approach to drop companies from the proxy group whose company-specific cost of equity estimates lay outside a bandwidth of the mean plus or minus two times the variance. In this way Staff sought to obtain statistically representative estimates.

DCF Model: Staff relied on a single-stage DCF approach, using the latest available data consistent with the forward-looking nature of the DCF approach, in order to capture investors' expectations about how companies will fare in the future. Post-Hearing Brief at 15. The dividend yield component was determined by dividing Value Line projections for dividends per share by average stock price for the proxy group companies as reported by Yahoo! Finance during a one-month period.

For the growth component, Staff relied on 5-year projections and several estimates of growth rates on the assumption that investors as a group do not utilize a single growth estimate when they price a utility's stock. Staff criticized the Company's reliance on one measure of

growth, earnings per share, as being inconsistent with the reality that returns from stock investment in utilities largely come from dividends growth and price appreciation is not a dominant contributor to the returns that investors accrue from utility stocks.

In addition, Staff stated that while the Company claimed that the use of book value per share growth is inappropriate because stocks do not trade at constant market-to-book ratios, the Company proposed to use only earnings growth because "with the constant price-earnings ("P/E") multiple assumption of the DCF, the value of the firm (i.e., its stock price) will grow at the earnings growth rate." Exhibit 33 at 15. Staff argued that just as stocks do not trade at constant market-to-book value ratios, the reality is that the price-earnings ratio does not remain constant over time.

Finally, Staff disputed the Company's argument that the article by Professor Myron Gordon stands for the proposition that forecasts of earnings per share growth is the best measure of growth in the DCF model. Staff maintained that the article merely compared the performance of expected growth in earnings with past growth rates in earnings, dividends and retention, without offering any evidence on whether forecasts of dividend per share growth or book value per share growth are inferior compared to the forecast of earnings per share growth. Staff concluded that the Company's reason for rejecting Staff's DCF growth component approach is no stronger than the reason advanced in favor of the Company's approach.

Specifically, Staff used projected growth rates for earnings per share (the average of Value Line, IBES/First Call, and Zacks figures), dividends per share (Value Line figures), and book value per share (Value Line figures), and also on an estimate of the sum of internal and external growth rates, i.e., the br + sv formulation which takes into account retention ratio, expected return on common equity, market-to-book ratio, and growth in outstanding shares.

Staff also derived a cost of equity estimate based on the Market-to-Book method. This method starts with the basic DCF equation and then models the growth in outstanding shares and external financing to arrive at a cost of equity estimate using available data regarding investors' expectations about the retention ratio, return on equity, and growth in the number of outstanding shares. The input data is similar to that used in the br + sv approach.

Staff calculated three point estimates for ROE. Its recommended point estimate was the average of: (i) the average of the DCF estimates based on earnings per share, dividends per share and book value per share, (ii) the DCF estimate based on the br + sv approach, and (iii) the DCF estimate based only on earnings per share. In determining a reasonable range of estimates for ROE, Staff derived a second point estimate by averaging the three DCF estimates just described and the market to book estimate, and a third point estimate by averaging all of the above plus the two CAPM approaches described below. The range was determined to be the highest and lowest of these three point estimates. In Staff's pre-filed testimony, its recommended point estimate fell within the range of reasonable estimates, while its updated point estimate lay at the upper end of the range.

By averaging the results in this way, Staff sought to obtain a measure of the cost of equity based on a central tendency. Post-Hearing Brief at 11, 23. In addition, the use of the Market-To-Book method and two alternative renderings of CAPM were intended as checks for the reasonableness of the results of the traditional DCF approach. *Id*. at 23.

Staff opposed the Company's proposal for a leverage adjustment. Staff argued that, contrary to the Company's position that the adjustment is justified by the degree of financial risk facing the Company, the leverage adjustment is based on and calculated with reference to a market value-to-book value adjustment. Staff asserted that at hearing the Company conceded

that its proposed leverage adjustment is driven by the difference between the book value of common equity and the market value of common equity, arguing further that the leverage adjustment is driven by the market-to-book ratio being greater than one.

According to Staff, the fallacy of the proposed leverage adjustment can also be seen in the situation where the market-to-book ratio is less than one, which would generally be the case when the allowed return on equity is less than the market cost of equity. The adjustment in that situation would imply a downward adjustment to the allowed return on equity, because the market equity-to-debt ratio would be less than the book value equity-to-debt ratio, but this would only further aggravate the situation for the utility, as it would experience even greater stock dilution.

Staff also noted that the use of a book value capital structure to determine a utility's cost of capital is a long-standing practice that is well understood by investors and that, for any regulated company, the actual financial risks facing the company are the same regardless of whether the book value or the market value of the company is used to represent its capital structure. Finally, Staff pointed out that the Commission has never permitted a leverage adjustment.

Staff also opposed the Company's proposed flotation cost adjustment. Staff denied that its position depends upon whether natural gas companies in general or the Company in particular will be issuing new common stock in the future, although Staff noted that the Company does not plan to issue any new stock in the future. In addition, Staff denied that if one includes external financing growth in a DCF calculation, a flotation cost adjustment is required. Staff maintained that even though stock buyers are well aware that a company's receipt of funds per share is less that the price of the share, they commit to such funding, indicating that the return they expect

from the company's equity capital is as high or higher as the opportunity cost of equity. And in Staff's view, where as here the market-to-book ratio is significantly higher than one, the DCF approach produces a sufficiently upward biased estimate of the market cost of equity that dilution of stocks, which is when flotation costs usually become relevant, is a non-issue. Finally, Staff pointed out that the Commission has historically denied the inclusion of a flotation cost adjustment to the ROE, citing *Public Service Company of New Hampshire*, 90 NH PUC 250, and stated that the Company has presented no basis this case to cause the Commission to depart from its established practice. In its updated hearing testimony Staff recommended a cost of equity of 9.33% based on the DCF approach.

CAPM: Staff performed the analysis two ways, one with data applicable to *all* Value Line stocks and the other with data applicable to all *dividend paying* Value Line stocks, each of which relied on the DCF construct in estimating the relevant overall market portfolio return. According to Staff, the determination of two CAPM estimates permits the calculation of a valid, consistent estimate for the market return component of the equity risk premium and avoids the problem with the Company's calculation, which is based on the inappropriate use of dividend-paying Value Line stock data for the dividend yield and all Value Line stocks for the growth component. Staff stated that its application of CAPM relies to the extent possible on a forward-looking approach, while the Company relied more heavily on historical data. Post-Hearing Brief at 24.

With each analysis, Staff determined the risk free rate of return from the average of the most current month's daily yields on the ten-year Treasury note. Staff favored the use of actual market data for this input, rather than the forecast data and judgment used by the Company, to ensure that the appropriate risk free yield is based on current market realities. Also with each

analysis, Staff used the latest available Value Line beta figures for the proxy group companies, without any leverage adjustment.

Staff relied on the current average beta for the Value Line universe of companies in connection with developing the market equity risk premium and criticized the Company's use of an outdated beta figure. Regarding that component of the CAPM analysis, Staff used the same risk-free rate of return described above and determined the market portfolio return in a manner consistent with its preferred approach to estimating the cost of equity using the DCF model, i.e., determining an estimate for next year's dividend yield and adding to that a growth component calculated as the average of Value Line's projections for earnings, dividends and book value growth. Staff then adjusted the market return to account for the fact that while the market beta is one, the groups that were used as proxies for the market had betas that were higher than one.

Staff opposed the use of a small company size adder because the evidence on small-firm effect is not sufficiently persuasive that it could recommend its adoption. Staff also rejected the use of a leverage adjustment and flotation cost adjustment for the reasons described above in connection with Staff's DCF approach.

In its updated hearing testimony regarding the CAPM analysis applicable to *all* Value Line stocks, Staff used a risk-free rate of 2.39%, a beta of 0.69, and an adjusted market equity risk premium of 6.84% to arrive at an indicated cost of equity of 7.08% based on its first approach. Regarding the analysis applicable to all *dividend paying* Value Line stocks, Staff used a risk-free rate of 2.39%, a beta of 0.69, and an adjusted market equity risk premium of 8.89% to arrive at an indicated cost of equity of 8.48% based on its second approach.

According to Staff, if the Company had correctly accounted for the significant recent reduction in the risk-free yield, the significant fall in the beta associated with the proxy

companies, and the relevant measure for dividend yield and growth in yield, the Company's CAPM estimate would have been more consistent with Staff's estimates. In addition, noting that its two updated CAPM estimates decreased compared to the levels that were calculated at the time of its pre-filed testimony, Staff maintained that this outcome is not surprising given the differences in the economic circumstances existing at the time the estimates were made. Staff pointed out that the yield on the 10-year Treasury note had fallen significantly from 3.80% to 2.39% and the Value Line beta associated with Staff's proxy group had fallen considerably, from 0.81 to 0.69. In addition, Staff stated that in deriving its CAPM Method 1 estimate, the average of the expected median growth rates in earnings, dividends and book value, as reported by Value Line, fell from approximately 10% to 9.17%, and in deriving the CAPM Method 2 estimate, that same average fell from approximately 9.33% to 8.5%.

In addition to disputing the Company's application of the DCF and CAPM methods, Staff addressed the question of the effect of turmoil and volatility in the financial markets on the cost of equity. Staff did not disagree that there has been a great deal of turmoil in the financial markets but challenged the Company's conclusion regarding the effect of that turmoil on the appropriate ROE. Staff argued that its DCF estimates already reflect investor expectations about how volatility impacts the cost of equity, as these expectations are reflected in the stock prices and in expected growth in earnings, book value, and dividends. Thus, according to Staff, the DCF method is sufficiently robust that it already reflects the impact of volatility on the cost of equity associated with the proxy companies.

In Staff's view, the volatility in the stock prices of the proxy group companies is what is important for purposes of estimating the cost of equity, rather than the volatility associated with a market index, such as the Chicago Board Options Exchange Volatility Index, which is only

remotely reflective of the realties faced by the proxy group. Staff concluded that the volatility associated with the gas proxies is not as high as the volatility associated with the market, noting that when the Company filed its direct testimony in February 2008, the Value Line-reported beta for the company's proxy group was 0.86, but by the time of the hearing it had decreased to 0.70, and that the Value Line beta for Staff's proxy group was 0.81 in October 2008 at the time its pre-filed testimony, and at the time of hearing it was 0.69. This trend in betas indicated to Staff that the risk associated with the proxy stocks has gone down while the Value Line Price Stability Index has remained at the highest possible level, i.e. 100, for all of the proxy stocks.

Comparing the prices associated with the proxy companies on January 22, 2008 to those on January 22, 2009, Staff pointed out that the changes associated with the Company's proxy average is 3.2% and with Staff the proxy average is 1.5%. Staff compiled a table indicating that these figures are significantly different from the corresponding changes in the Dow Jones Industrial Average and Dow Jones Utility Average, which does not contain any gas distribution companies. That is, while the proxy averages have seen growth in the stock prices, the Dow Jones Industrial Average and the Dow Jones Utility Averages fell significantly during that period.

Stock Prices Averages	**Growth between Jan. 22, 2008 and Jan 22, 2009**
Dow Jones Industrial Average	-32.1%
Dow Jones Utility Average	-24.9%
Moul Proxy Average	+3.2%
Chattopadhyay Proxy Average	+1.5%

Staff also asserted that, compared to the middle of March 2008, the stock prices associated with the proxy companies were not significantly different at the beginning of January 2009. Finally, Staff concluded that the recent data indicates that the volatility associated with the

proxy companies has been lower than before. To Staff, the stability in the DCF cost of equity estimates is consistent with relatively low recent volatility associated with the proxy stocks. According to Staff, the stability in the DCF cost of equity is also consistent with its observation that, during bad economic times, investors are attracted to regulated utility stocks as there is a "flight to quality" and regulated stocks are considered safe-harbors.

Staff also urged the Commission to base its ROE decision on the sound application of analytical approaches, rather than on surveys of what other jurisdictions have allowed in other cases. Staff stated that, in contested cases, the Commission relies on expert testimony specific to the utility whose rates are being established, noting that if the return on equity would be determined by means of a survey, there is no need for expert testimony. In addition, if the Commission were to rely on surveys, the results become circular since the Commission would be looking to the return on equity figures in other states and they in turn would be looking to New Hampshire. Staff concluded that, if this were to happen, the Commission would not be objectively considering what the cost of equity is, or what just and reasonable rates are, for a particular utility at a point in time.

Staff further contended that if a reasonable ROE is around 10.5%, then the Company's ROE recommendation of 12.25% is necessarily unreasonable. In addition, Staff stated that the Company's list of the allowed ROEs in electric and gas utility rate cases included in its rebuttal testimony is not complete and gives a misleading impression of the returns being authorized. This abbreviated listing was based on a more comprehensive list filed by the Staff of the New York Public Service Commission in a New York proceeding, which in Staff's view showed that allowed ROEs have been variable and that returns below 10% are not uncommon. While the Company emphasized the 10.5% return recently authorized by the Rhode Island Public Utilities

Commission for a gas distribution company affiliated with the Company, Staff stated that allowed ROEs remain variable, as indicated by the 8.75% return recently authorized for United Illuminating Company by the Connecticut Department of Public Utility Control.

Staff urged the Commission to keep in mind that the ROE figure is only one piece of the much larger revenue requirement puzzle and much more would have to be known about the circumstances of the rate cases in other proceedings before any meaningful comparisons could be made. Staff noted the Company's agreement at hearing that before one can assess the significance of a particular figure such as return on equity in a rate case, it is important to consider the other elements of the case, including among others, rate base, capital structure, and operating expenses.

Regarding the Company's argument that shareholders may pressure it to invest more in jurisdictions where the return is higher, Staff stated that as a public utility the Company is required to continue to provide safe and reliable gas distribution service at reasonable cost regardless of whether the ROE is 9.33% or 12.25%, and if the revenue requirement is set too low to continue to provide adequate support for the Company's operations, it has the opportunity to file another rate case to remedy the problem.

Staff responded to the Company's argument regarding the Commission's history of being more restrictive in its cost of equity determinations than many other state regulatory commissions by pointing out that the Company's ROE witness admitted that he had not studied the financial health of the natural gas and electric utilities regulated by the Commission whose returns on equity he mentioned. Staff submitted that the Commission can decide for itself whether the ROEs between 9% and 10% authorized in past decisions have been harmful to the financial condition of those utilities.

Staff also addressed the Company's argument that, in light of changed market fundamentals since the previous returns on equity were authorized, the low returns cannot be reconciled with Staff's ROE recommendation, and specifically that, because at the time of the Company's pre-filed rebuttal testimony the yield on A-rated public utility bonds was approximately 7% and the average spread between the Commission's authorized ROEs and those yields was 3.64%, the Company's return on equity in this case should be at least 10.64%. Staff noted that the ROEs approved by the Commission in these cases were the result of settlement agreements, not contested return on equity determinations. According to Staff, since the spread identified by the Company is based on historically approved ROEs emanating from settlements, such a spread is not an appropriate basis for judging the reasonableness of Staff's recommendation in this case and it may be assumed that, before agreeing to settle, the utilities in those cases must have concluded that the ROEs they were agreeing to were not unduly low.

Staff also maintained that with its updated data showing that the average yield on A-rated public utility bonds is approximately 5.95%, the Staff recommended ROE produces a spread of 3.38%, which is reasonable in Staff's view. At hearing, Mr. Moul indicated that the January 2009 yield on A-rated utility bonds was 6.35 percent. Day 2 Tr. at 147, lines 12-13; see also Exhibit 53. Even accepting the Company's figure for the average yield on A-rated public utility bonds, 6.35%, the Staff recommendation produces a spread of around 3%, which is also reasonable according to Staff.

As to the ROE-related testimony offered by Nickolas Stavropolous, the Company's President and Executive Vice President for National Grid's United States Gas Operations, Staff stated that the testimony did not add anything to the Company's technical analysis. Claiming that Staff's return on equity estimate was too low, Mr. Stavropolous stated that Staff's return on

equity is only 1.45% higher than the interest rate on A-rated utility bonds. In response, Staff stated that the facts at hearing indicated that the spread between Staff's updated return on equity recommendation and the interest rate on these bonds was approximately 3%, which is not unreasonable in Staff's view.

Finally, Staff addressed the Company's position that Staff was operating from an inherent assumption that the Company's return on equity should be on the low side because Staff both assumed a low return because the economy in New Hampshire is doing relatively well and argued for a low return because it is a time of financial turmoil in which investors are likely to gravitate to low risk equities and bonds, including public utilities.

Staff denied that there was any contradiction in its pre-filed testimony. According to Staff, the operative concept is relative risk: when the economy is in a downturn or recession, regulated stocks are more attractive relative to the market portfolio, and regulated stocks tend to attract interest at the expense of riskier investments. According to Staff, in relative terms this tends to put a downward pressure on the required returns on regulated stocks.

Staff also defended the choice of its proxy group. Staff was confident that its proxy group faces circumstances at least as risky as those faced by the Company. According to Staff, its analysis was geared toward asking whether, given the location of its operations in New Hampshire, the Company is more risky or less risky than the situation faced by the gas companies in its proxy's footprint. Staff found that the economic situation in New Hampshire indicates that the Company is faced with less risk compared to that faced by its proxy group. Finally, Staff stated that, consistent with its objective to balance the interests of rate payers and investors, Staff has endeavored to make a reasonable ROE recommendation.

C. Office of Consumer Advocate

The OCA joined with the other parties and Staff in supporting the partial settlement agreement. The OCA stated it is particularly pleased that the rate design terms flatten the Company's current residential rate design of significantly declining blocks and it believes that the agreed-upon rate design sends better price signals to encourage energy efficiency and reductions in customers' energy usage, bills and environmental impacts.

OCA stated that the allowed return on equity must be determined in the context of the requirement that rates be just and reasonable and by balancing the interests of the Company and its investors with those of its customers. OCA maintained that the Commission's determination of the rate of return, which compensates investors for the risks they assume when they lend to the company and buy its stock, is akin to the determination of rates in that the exercise of judgment and discretion is required in balancing the competing interests. Citing precedent from the New Hampshire Supreme Court and orders issued by the Commission, OCA stated that ultimately the allowed ROE must fall within a zone of reasonableness, the lower bound of which is a rate that at minimum is sufficient to yield the cost of debt and equity capital necessary to provide the assets required for the company's responsibility and the upper bound of which, subject to limited exceptions,[7] is a rate sufficient to yield a return comparable to that generally being made at the same time and general location on investments in other business undertakings attended by corresponding risks and uncertainties.

In fixing the ROE a considerable amount of judgment must be applied in the analysis, the goal of which is to develop an ROE that attracts investment at the lowest cost to consumers. OCA stated that the Commission should consider a number of issues, including which estimation

[7] The exceptions referred to include the use of a hypothetical capital structure and allowances for the relative efficiency of management.

method best captures equity investors' expectations of the risk associated with the Company's common equity, which proxy group of companies is most comparable to the Company in terms of risk, whether to adjust the results of the estimation method upward for flotation costs and leverage risk, and what weight to give to the Company's claims regarding the effect of market volatility on ROE and the ROE determinations made by regulatory agencies in other jurisdictions.

OCA argued that the DCF method produces a reasonable ROE, is consistent with Commission precedent, and should be the primary basis for the Company's ROE, with other methods being used to test the reasonableness of the DCF results. According to the OCA, the advantages of the DCF method include its forward-looking nature and consistency with the forward-looking concept of cost of equity. OCA stated that because the CAPM and RP methods rely on historical data to estimate ROE, they are less reliable. Another advantage in OCA's view is that when, as has been the case with the gas industry, the market-to-book ratio is significantly greater than one,[8] the DCF method produces a better result, one that is more consistent than other methods with the "rule" that a utility's threshold entitlement is to a rate of return equal to the cost of capital. OCA contrasted this with the CAPM and RP which it said largely rely on the appreciation of stock prices and tend to overestimate the true cost of equity. OCA also maintained that the DCF method better reflects investors' perception of a company's risk and is a well accepted way of explaining observed investor behavior. Finally, the DCF has been used in good and bad economic times and is consistent with the Commission's long-standing practice.

The OCA pointed out that Mr. Moul derived his recommended ROE by averaging the results of his DCF, CAPM, and RP methods, with equal weighting. On the other hand, by using

[8] OCA stated that, under these circumstances, the expected return on equity, which is greatly influenced by the allowed ROE for a regulated utility, exceeds the true opportunity cost of equity.

multiple ways of calculating the DCF and giving weight to each, Dr. Chattopadhyay accounted for the DCF's limitations and derives an ROE that primarily relies on the DCF method. OCA supports Staff's method and its recommendation that the Commission continue its long-standing practice of calculating ROE.

The OCA stated that in choosing proxy group companies, the challenge is to narrow the proxy group enough to reflect the risks faced by the Company and find a large enough proxy group to mitigate distortions introduced by possible measurement error or vagaries in individual companies' market data. OCA pointed out that the Company and Staff used the same screening criteria except that, for its proxy group companies, the Company required a weather-normalizing and/or decoupling feature in the tariff and that at least 60% of assets be subject to utility regulation, while Staff did not use a weather normalization/decoupling feature and imposed an 85% of assets test. OCA stated that in selecting his proxy group, Dr. Chattopadhyay also assessed for each proxy company and National Grid NH certain measures of financial risk, including some, if not all, of the measures Mr. Moul identified and thereby confirmed that the financial risks of his proxy companies were comparable to the Company's financial risk. In OCA's opinion, given that 100% of the Company's assets are subject to State regulation, Dr. Chattopadhyay's proxy group is more comparable to the Company than Mr. Moul's proxy group.

According to the OCA, the Company unsuccessfully relied on Staff ROE testimony in prior dockets to show that the Staff's 85% of assets test is arbitrary since the prior testimonies used percentages of regulated revenues rather than regulated assets as Staff used in this case.[9] In addition, OCA pointed out that the Company did not propose a weather normalizing or decoupling feature.

[9] Considering revenues and income, however, OCA asserted that Staff's proxy group comes closer to the Company's situation than the Company's proxy group.

The OCA joined Staff in opposing the Company's proposed leverage adjustment, arguing that it did not meet its burden of proving that the adjustment was required to produce a reasonable ROE. OCA maintained that the risk related to leverage is not atypical of the gas industry and is known to investors. Citing *Pennichuck Water Works, Inc.*, Order No. 17,911, 70 NH PUC 850, 863 (1985) (denying a risk adjustment based on smaller size and higher financial leverage), OCA stated that leverage risk is captured in the stock price that forms the basis for the DCF calculation and argued that allowing a leverage adjustment would amount to a double recovery. OCA further pointed out that the average capital structure and five year average common equity ratios, based on permanent capital, for the Company's proxy group is not much different than the agreed-upon capital structure used to set the Company's rates in this case. Finally, the OCA stated that since the Company agreed to an imputed capital structure in exchange for approval of the Grid-KeySpan merger and benefited from the settlement, it is unreasonable and unfair for the Company to now seek an upward leverage adjustment due to the higher debt in the agreed-to capital structure.

Like Staff, the OCA also opposed the Company's proposed flotation adjustment. OCA noted that the Commission has historically denied such adjustments and the Company plans no new common stock issuances other than to satisfy employee stock programs. OCA stated in addition that flotation costs are not actual expenses of the Company.

Regarding the question of the impact of market volatility on ROE, OCA maintained that the common equity of the proxy group companies has been much less volatile than the market as a whole. As evidence, the OCA pointed to the data showing that, between January 2008 and January 2009, the value of Staff's proxy group companies increased slightly while the Dow Jones Industrial Average declined approximately 32%. In OCA's view, the evidence supports

the conclusion that public utility stocks are among the destinations in investors' "flight to quality." Finally, OCA argued that, to some extent, the market price reflects the volatility of the market, which is reflected in the DCF results.

The OCA argued that the ROEs from other jurisdictions are not persuasive regarding the ROE for the Company, citing *Public Service Company of New Hampshire*, Order No. 24,552, 90 NH PUC 542, 556 (2005) (rejecting "bald comparisons" between the utility and ROE decisions from regulatory commissions in other states). Assuming that the Commission could consider decisions from other jurisdictions without a circular effect, which it said is questionable, OCA argued that the Commission would need more information than is in the record to make a valid comparison.

OCA concluded by stating that the Commission should approve the zone of reasonableness recommended by Staff and select an ROE within that range. In addition, OCA asserted that it is appropriate for the Commission to consider the rate impacts at different ROE levels. OCA stated that at the Company's proposed ROE of 12.25%, total bills for residential heating customers will increase between 2.41% and 51.11% from the permanent rates last set for the Company. By comparison, at the 9.01% ROE initially recommended by Staff, the total bill increase would be between 0.29% and 39.27%. Focusing on the customer charge, the increase would be 39.27% at Staff's recommended ROE compared to 51.11% at the Company's recommended ROE. OCA also maintained that the Company's expert and its analysis are not objective and disinterested, unlike Staff's expert and analysis, and stated that the ROE needs to be reasonably durable particularly in light of the uncertainty about how long it will apply and the fact that this is a unique time in the market.

D. Pamela Locke

Ms. Locke, a low income residential heating (R-4) customer, supported the partial settlement agreement, including the provision capping rate class revenue targets at 112.5% and the rate design principles resulting in a significantly lower customer charge increase than that initially proposed, the flattening of the declining block, volumetric rate design for the R-3 residential heating rate and the R-4 low income discount rate, and the flat rate for the R-1 non-heating customers. Ms. Locke stated that these changes reduce the rate impacts on residential customers, especially low income and elderly customers on the R-4 low income discount rate and lower use customers. Ms. Locke also noted the Company's agreement to meet with her regarding a possible increase to the R-4 rate, possible enhanced outreach efforts to low income customers on the R-3 rate who might be eligible for the R-4 rate, and enhanced collection activities.

Ms. Locke stated that in setting the Company's return on equity, the rates fixed by the Commission must be just and reasonable in accordance with RSA 378:7, :27 and :28 and according to her the term "reasonable rate" is understood as referring to the result of the ratemaking process. Ms. Locke argued that rate impacts can be helpful in evaluating what return on equity is most appropriate. She pointed out that a return on equity of 9.01% for an R-4 household consuming 50 therms per month would result in a 1.88% bill increase compared with a bill increase of 3.2% under a 12.25% return on equity. She stated that for many low income households an additional 2-4% increase in winter heating bills can mean the difference in being able to pay the co-pay on a needed medication or the gas needed to go to work. She also pointed out that in a tough economy rate increases are particularly harmful to low income customers

V. COMMISSION ANALYSIS

A. Partial Settlement Agreement

Under N.H. Code Admin. Rules Puc 203.20(b) the Commission shall approve the disposition of any contested case by settlement if it determines that the result is just and reasonable and serves the public interest. *See also* RSA 541-A:31, V(a). In determining the public interest we serve as arbiter between the interests of customers and those of regulated utilities. *See* RSA 363:17-a; *see also Public Service Co. of N. H.*, Order No. 24,919 (Dec. 5, 2008) at 7-8. Moreover, we scrutinize settlement agreements thoroughly regardless of whether a party appears at hearing to raise objections. *Kearsarge Tel. Co., et al.*, Order No. 24,885 (Aug. 8, 2008) at 11.

"In general, the Commission encourages parties to attempt to reach a settlement of issues through negotiation and compromise as it is an opportunity for creative problem solving, allows the parties to reach a result more in line with their expectations, and is often a more expedient alternative to litigation." *Concord Electric Co.*, Order No. 24,072, 87 NH PUC 694, 708 (2002) (quotation omitted). However, even where all parties join a settlement agreement, the Commission cannot approve it without independently determining that the result comports with applicable standards. *Id*. The issues must be reviewed, considered and ultimately judged according to standards that provide the public with the assurance that a just and reasonable result has been reached. *Id*.

We have considered the process leading up to a proposed settlement to be a relevant factor in whether the settlement should be approved. For example, we have said that the fact that parties involved in a docket leading to a settlement agreement represented a diversity of interests, and that there was a demonstration that the issues were diligently explored and negotiated at

length, provides a basis for concluding that the results of the settlement are reasonable and in the public interest. See *National Grid plc*, Order No. 24, 777, 92 NH PUC 279, 327 (2007).

We apply these standards in connection with our review of the partial settlement agreement, keeping in mind not only that we must rule on the separate contested issue of the allowed ROE but also that the issues with respect to the partial settlement agreement and ROE are inter-related since we must ultimately find that the Company's resulting rates are just and reasonable under RSA 378:28. For the reasons set forth below, we find that the partial settlement agreement is reasonable and in the public interest.

The partial settlement agreement notes that the Company responded to multiple rounds of data requests from Staff and the intervenors, the Company propounded data requests to Staff and the intervenors, and the Staff and parties held two technical sessions to conduct discovery. In addition, Staff and the parties held settlement discussions over a three-day period. The OCA and a low income residential customer, both of whom participated actively in this docket, fully supported the settlement. In addition, Staff testified at hearing that the partial settlement agreement satisfactorily addressed the concerns it raised, other than the ROE issue. Under these circumstances, we conclude that the process leading up to the partial settlement agreement allowed for the issues to be thoroughly explored in discovery and negotiations by parties representing a diversity of interests, providing a basis for concluding that the result of the partial settlement agreement, as far as it goes, is reasonable and in the public interest.

As Staff pointed out in its Post-Hearing Brief, at the Company's recommended ROE of 12.25%, the partial settlement agreement would result in a revenue requirement increase, applicable to both delivery and supply service, of approximately $8.8 million, or $2.2 million less than the approximately $11 million increase requested in the Company's rebuttal

testimony.[10] At the Staff's recommended ROE of 9.33%, the partial settlement agreement would result in a revenue requirement increase of approximately $5.2 million. Thus, the partial settlement agreement reduces the rate impact on customers compared to the approximately $11 million revenue increase requested by the Company, albeit to a much more limited degree at the Company's proposed rate of return than at the Staff's proposed rate of return.

The partial settlement agreement resolves a great many issues raised in this docket. In addition, the settlement negotiations provided a means for resolving two other complicated, intensively litigated matters to which the Company is a party, DG 07-050 (Accrual Accounting) and DG 07-072 (Carrying Charge Rate for Cash Working Capital), another factor favoring its approval.

The Company's filing included in rate base capital projects identified as construction work in progress which, if those projects were not in service, would violate New Hampshire's anti-CWIP statute, see RSA 378:30-a. The rate base agreed to in the partial settlement agreement comprises only capital costs related to projects which have been placed in service, ensuring compliance with the statute.

The bad debt issue, which has been before the Commission for some time in connection with commodity costs, is addressed by implementing a bad debt percentage that is less than what the Company is currently experiencing, but, assuming enhanced collection practices, is a reasonable target. The partial settlement agreement provides for increased staffing for

[10] Not included in these figures are the revenue effects of the return on equity determination on the Capital Investment Allowance for Cast Iron-Bare Steel Replacement Program expenditures recoverable as a permanent increase to the Company's base delivery rates under the merger settlement agreement approved in Order No. 24,777 (2007), the Company's recovery of rate case expenses, or charge/refund resulting from the reconciliation of temporary and permanent rates.

collections and takes into account increased collection costs. The step down in the bad debt percentage related to commodity costs recognizes it will take some time to reduce write offs.

The partial settlement agreement calls for the depreciation reserve surplus of over $12 million to be adjusted down by almost one million dollars per year. While we would normally prefer to see deprecation reserve surpluses or deficiencies addressed over a shorter time frame, the longer time period is warranted in this instance due to the magnitude of the surplus and the resulting rate impact.

Pension-OPEB costs are included in the revenue requirement and delivery rates will not be adjusted annually for fluctuations in those costs. Such treatment is reasonable, as pension-OPEB expenses are an ordinary category of expense included in the revenue requirement for a utility under traditional cost of service ratemaking principles. *Unitil Energy Systems, Inc.*, Order No. 24,449, 90 NH PUC 133, 136 (April 7, 2005). Changes in pension-OPEB costs due to market fluctuations are expected and will impact earnings from year to year, both positively and negatively. The Company may file a rate case if it believes it is significantly under-earning, just as Staff or other parties may request an investigation in the event of a perceived over-earning, at which time a full examination of all income and expenses items would be undertaken.

The partial settlement agreement retains the current line extension policy with one exception: currently, residential customers within 80 feet of an existing main are guaranteed service at no cost to them but they may now be required to pay a contribution in aid of construction (CIAC) based on the results of the revenue test currently used to determine CIAC on non-residential service requests. In instances where four years of projected customer revenues do not exceed the expected capital cost of the extension, a customer contribution will be required. The revenue test reduces the risk of subsidization of new customers by existing

customers and ensures that customer requests for service satisfying the test will be provided service.

Regarding rate design, in order to reflect the results of the Company's marginal cost of service study, some rate classes will be subject to higher rate increases than others under the partial settlement agreement. However, the rate design reduces the Company's proposed increase to the customer charge, flattens the difference between the proposed head and tail block volumetric charges, and caps revenue class targets at 112.5% of the overall Company average delivery rate increase. Consequently, the rate design reduces the disparity of the rate increases between classes, as well as the disparity of the rate increases between high and low use customers. Another benefit to flattening the difference between the head and tail block volumetric charges is that it will promote greater energy conservation. Finally, a critical consideration in our approval the partial settlement agreement is that the rate design changes are supported by the Company's marginal cost of service study.

B. Return on Equity

1. Evidentiary Significance of ROE Survey Data

While acknowledging that each jurisdiction must conduct its own cost of equity analysis in order to avoid circularity and ensure that the outcome has integrity, the Company contended that the Commission should set an ROE that reflects the return investors expect to earn elsewhere and that returns available in other jurisdictions and in other companies, averaging about 10.4% in 2008, are "highly relevant" to the determination of an allowed ROE. In addition to presenting some selected allowed ROE figures in its rebuttal testimony, the Company introduced Exhibit 55, a supplemental study conducted by Regulatory Research Associates regarding "major" rate case decisions between January 2007 and December 2008; the data

includes average allowed ROEs and a listing of overall rates of return, ROEs, and capital structure of the companies involved in the decisions. This contention raises the question of the evidentiary significance of such survey data relative to the expert analytical testimony presented by the Company and Staff in support of their ROE recommendations.

According to the Company, in setting a return comparable to that for companies of similar risk, regulators must also consider that investors and utilities make their decisions in a world with multiple investment options, all competing for the same capital. In the Company's view, the relative levels of allowed returns in different jurisdictions matter because the various jurisdictions compete for discretionary capital investments made by utility holding companies doing business in multiple jurisdictions. Along a similar line, the Company argued that the Commission's ruling on ROE will be viewed as a clear statement of whether the Company should continue to invest significant levels of discretionary capital in New Hampshire and that a 9.33% ROE, at a time when the average ROE for gas utilities is 10.4%, is inadequate to attract capital for this purpose and would send a message that New Hampshire is not the place for the Company to make investments that are not absolutely required.

Staff, on the other hand, argued that, consistent with its practice in contested cases, the Commission should base its ROE decision on the application of analytical approaches specifically addressed to the Company, rather than on mere surveys of what other jurisdictions have allowed in other cases. Staff stated that as a public utility the Company is required to continue to provide safe and reliable gas distribution service at reasonable cost regardless of whether the ROE is 9.33% or 12.25%, and if the revenue requirement is set too low to continue to provide adequate support for the Company's operations, it has the opportunity to file another rate case to remedy the problem. The OCA also opposed the use of ROE survey data.

The Commission addressed the evidentiary significance of ROE survey data in *Public Service Company of New Hampshire*, Order No. 24, 552, 90 NH PUC 542 at 556-557 (December 2, 2005), where a similar argument was advanced by the utility. In that case, the Commission refused to replace the methods used by the expert witnesses in favor of a "bald comparison" of the utility's ROE with that of other companies, in the absence of any evidence as to the differences and similarities in risk. *Id*. at 556. Similarly, here, with little or no evidence in the record regarding the circumstances behind the ROEs awarded in other cases, in other states and at other times, including, for example, the risks, market conditions, regulatory factors and reasoning behind the ROE awards, we are unwilling to base our judgment of what constitutes a reasonable ROE for the Company on such survey results. We find that the use of analytical methods is a more reliable way of determining a reasonable ROE than surveys.

We do not consider that determining an ROE for the Company in New Hampshire is part of a competition among the states for National Grid's discretionary investment dollars. The Company is obligated to provide safe and reliable utility service at reasonable cost regardless of the allowed ROE. When the Commission establishes an ROE, it must do so objectively. The Commission is:

> bound to set a rate of return that falls within a zone of reasonableness, neither so low to result in a confiscation of company property, nor so high as to result in extortionate charges to customers. A rate falling within that zone should, at a minimum, be sufficient to yield the cost of debt and equity capital necessary to provide the assets required for the discharge of the company's responsibility. Appeal of Conservation Law Foundation, 127 N.H. 606, 635 (1986) (citation omitted).

See also New England Telephone and Telegraph Co., 104 N.H. 229, 236 (1962) (Commission must consider the testimony of cost of capital witnesses reflecting the investor's point of view together with the interest of the consumer in arriving at just and reasonable rates.) The capital attraction standard alluded to in Appeal of Conservation Law Foundation and discussed in the

seminal Hope and Bluefield cases[11] relates to an allowed ROE that will attract capital from the investment community generally, and not to an ROE sufficient to motivate a holding company to invest its discretionary capital in a utility subsidiary.

We understand, of course, that the Company is obliged to invest large sums of money toward infrastructure improvements, some of which do not immediately pay for themselves. We note, however, that the Company is no different from other utilities in this regard and that the Company does have an annual, base rate step increase mechanism allowing for recovery of certain of its infrastructure improvements in the form of the Capital Investment Allowance for Cast Iron-Bare Steel Replacement Program that is not available to most other utilities.

Based on data contained in Exhibit 55, the Company further argued that a comparison of the most recent allowed ROEs for Staff's peer group, which ranged from 10% to 10.7%, shows that Staff's ROE recommendation of 9.33% is unreasonable. However, for the reasons just discussed, we are not persuaded to discount Staff's expert ROE recommendation simply because it is less than these ROEs. See also *Public Service Company of New Hampshire*, 90 NH PUC at 555-556, where the same argument was raised and rejected.

2. Credibility of Staff's Expert Witness

The Company also argued in its Post-Hearing Brief that Staff's expert witness lacked sufficient familiarity with the gas industry and the Company's particular operating circumstances and risk factors to be a credible witness regarding the Company's cost of equity. Staff's expert did, however, review the long term S&P credit ratings of his proxy group companies, assess economic conditions in New Hampshire by comparing them to those of the economies associated with the jurisdictions of the proxy companies, and review other financial metrics considered by

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

the Company to be fundamentally important for judging relative risk, such as operating ratios and internal generation of funds. Not only were his expert qualifications conceded by the Company, but he displayed an understanding of the theoretical underpinnings of the ROE models and their implementation in this case. We also note that he is a Ph.D. economist who has previously testified on the cost of equity in DE 06-028.

While the Company's expert witness reviewed several qualitative factors bearing upon investors' assessment of overall risk, namely, competition in the natural gas business, throughput to large customers, and the Company's construction program, his recommendation was not tied in any concrete way to these factors but was based upon a fundamental, quantitative risk analysis of financial data comparing the Company, the S & P Public Utilities, and the proxy companies,[12] which are the same kinds of considerations taken into account by Staff's expert. Accordingly, we find the Staff's expert testimony to be credible.

3. Selection of Analytical Methodology

Next, we consider the merits of the analytical approaches advocated by the Company and Staff. The Company proposes that we average the Company's DCF, RP and CAPM results in order to determine a reasonable ROE. The Company urges that we use a combination of techniques to determine the Company's cost of equity because of the limitations and infirmities that are inherent in each method. See, e.g. Exhibit 9 at 41, 53. In the Company's view, exclusive reliance on the DCF is inappropriate for this reason and because the other three methods, RP, CAPM and CE, are more reliable indicators of the cost of equity in the present environment. Exhibit 9 at 5-5A.

The Company further asserts that the DCF method produces a result that is significantly different than the other methods and this raises questions about the reliability of the DCF method

[12] See e.g., Exhibit 9 at 10-15.

in the present environment. Exhibit 9 at 5A. The Company testified at hearing that when a model produces a number clearly out of keeping with the results of the other models, the analyst must check the implicit assumptions in the model and how it is being applied or, if necessary, supplement that model with other results. Day 1 Tr. at 70. In this case, the Company identified its DCF result as an "obvious" outlier because it was lower than the results of the other models. Day 1 Tr. at 69.

Staff and the OCA, on the other hand, supported the approach described in *Public Service Company of New Hampshire*, Order No. 24,473, 90 NH PUC 230 (June 8, 2005), where the Commission reiterated that the DCF has been the primary method used in New Hampshire to determine the allowed ROE, though the Commission also recognized that other valid methods may be used as a test of reasonableness.[13]

The Commission has long favored the use of the DCF method in determining ROE. For example, in *Pennichuck Water Works, Inc.*, Order No. 17,911, 70 NH PUC 850 (1985), the Commission noted that over the previous five years it had come to rely on the DCF method almost exclusively in determining a utility's cost of common equity. It stated that it had done so because "[o]ur knowledge and experience with the other methodologies leads us to conclude that, in our judgment, DCF is the most reliable and consistent method in terms of its application and results." *Id*. at 861. In *Pennichuck Water Works, Inc.*, Order No. 21,026, 78 NH PUC 621, 627 (1993), the Commission stated that it:

> continue[d] to believe that the DCF methodology is the appropriate way to calculate the cost of common equity but nonetheless encourage[s] the use of other methods as a test of the reasonableness of the DCF's result. We have consistently applied a DCF analysis for years, and are not persuaded that we should deviate from that analysis today.

[13] *Id*. at 247. For example, in that case the Commission employed the CAPM approach because of its established theoretical applicability and because each of the witnesses employed it, thus providing a thorough and consistent basis on which to test reasonableness. *Id*. at 250.

In that order, moreover, the Commission declined to accept the utility's argument that Staff's method of weighting dividends and earnings growth in the DCF analysis should be changed, stating, "in arriving at this conclusion we rely in part on RSA 378:8, which we believe places the burden on Pennichuck to demonstrate why the method should be changed. We do not believe Pennichuck has met its burden here." *Id*. at 628.

We recognize that, even using analytical methods such as DCF, the determination of an appropriate ROE is not an exact science and requires the exercise of judgment, particularly with respect to the choice of proxy group and data inputs. In addition, we are aware that the models use simplifying assumptions that do not always conform to the behavior of the capital markets.[14]

Nevertheless, the DCF remains a widely accepted approach used by regulators here and elsewhere to determine ROE. Day 1 Tr. at 110. In addition, its use is not limited to particular economic circumstances, a point conceded by the Company's expert at hearing when he agreed that it is used in both good and bad economic times. In its pre-filed testimony, the Company claimed that the RP, CAPM and CE methods are more reliable indicators of the cost of equity "in the present environment," see Exhibit 9 at 5A, but it produced no evidentiary support for that claim.

We do not agree with the Company that the DCF result is an "obvious" outlier because it was lower than the results of the other models. By the Company's reasoning, we might just as well regard the Company's high CAPM result as an outlier. And simply because the RP result lies in between the Company's DCF and CAPM results does not make it a fair representation of

[14] The Company's expert described several simplifying assumptions related to the single stage DCF, a constant dividend payout ratio, constant price-earnings multiple, and constant return on book equity, as well as issues regarding the emphasis to be placed on earnings per share, dividends per share, book value per share and retention growth, and whether flotation costs should be part of the DCF model. Day 1 Tr. at 65-66, 69. Exhibit 49 is the Company's list of the shortcomings of the RP, CAPM and CE approaches.

the cost of equity. Accordingly, we will follow the Commission's traditional approach relying primarily on DCF and using other valid methods as a check on the reasonableness of the DCF result.

4. Proxy Group

The Company and Staff applied the DCF method to somewhat different proxy groups. Four of the companies in Staff's proxy group were the same as the companies in the Company's proxy group, while three were different. The selection criteria used by the Company and Staff were similar except that, unlike the Company, Staff did not restrict the proxy group to companies operating with a weather normalization and/or de-coupling feature in their tariffs[15] and Staff restricted its proxy group to companies with more than 85% of assets engaged in regulated operations, while the Company chose a cut-off of at least 60% of assets subject to utility regulation. The OCA supported Staff's proxy group selection. We find Staff's selection of proxy group companies to be reasonable. Since the Company did not propose a weather normalization or de-coupling feature, a screening criterion based upon such a feature is not pertinent to the choice of proxy group. In addition, because 100% of the Company's assets are subject to utility regulation, Staff's 85% cut-off is more likely to reflect the risks faced by the Company than a 60% cut-off would. It is also noted that Staff's percentage of assets criterion did not result in a proxy group that is unduly small; in fact it is the same size as the Company's proxy group.

5. Growth Component of DCF Method

The DCF method explains the value of a financial asset as the present value of future expected cash flows discounted at the appropriate risk-adjusted rate of return, i.e., the cost of

[15] The Company had seriously considered including a decoupling proposal as part of its rate filing but ultimately concluded that it would be premature to do so. Exhibit 6 at 10.

equity. Exhibit 9 at 55. As applied to a proxy group, the basic single-stage DCF equation is as follows:

$$K = D/P + g$$

where K is the estimate of the cost of equity, D/P is the next period's dividend yield, i.e., the next period's dividend on one share of stock (D) divided by the price of one share of common stock (P), and g is the growth component. See also *Pennichuck Water Works, Inc.*, 70 NH PUC at 857. The Company and Staff applied the DCF method in different ways. The parties did not seriously dispute the determination of the dividend yield component of the DCF calculation. Rather, the dispute between the Company and Staff centered primarily on the growth component.

Staff urged that the growth component be considered as the anticipated growth in dividends per share, see Exhibit 27 at 15. The Company recognized that this is one form of the DCF model, but maintained that the growth component should be considered to be the growth in share value, i.e., a capital gains yield. Exhibit 9 at 61; see also Day 1 Tr. at 88. In part reflecting this difference of opinion, the Company and Staff relied on different measures for the growth component.

The Company only used forecasts of earnings per share growth, stating in its direct testimony that while, ideally, historical and projected earnings per share and dividends per share growth indicators would be used to assess investor growth expectations for a firm, the circumstances of the Company's proxy group[16] mandate a greater emphasis on projected earnings per share growth. Exhibit 9 at 21. The Company also defended its approach on general principles. For example, the Company argued that Professor Myron Gordon, the foremost

[16] The Company was apparently referring to the earnings per share and dividends per share growth projections for its proxy group, indicating that the dividend payout ratio will decline in the future. According to the Company, this fact was significant in conjunction with the Company's view that stock prices predominantly influence the returns expected by investors in utility stocks and the DCF assumption of a constant price-earnings ratio. Exhibit 9 at 20-21.

proponent of the DCF model in rate cases, established that analysts' earnings forecasts are the best input for the DCF. See, e.g. Exhibit 9 at 21; Exhibit 33 at 15. The Company also argued that because certain constant growth assumptions[17] do not actually prevail in the capital markets, the potential for capital appreciation is best measured by the expected earnings per share growth. Exhibit 9 at 62.

Responding to the non-earnings per share measures of growth relied on by Staff to make its ROE recommendation, i.e., dividends per share and book value per share, the Company, echoing some of its arguments in favor of earnings per share, maintained that Staff's dividend growth rates must be discounted because: (i) they are based on the forecast of a single analyst, Value Line, (ii) earnings are the source of dividends, (iii) with the constant price-earnings multiple assumption of the DCF, the firm's stock price will grow at the earnings growth rate, (iv) Professor Gordon established that earnings forecasts, rather than dividends per share forecasts, are the best input, (v) compared to the average growth rates relied on by Staff, its 2.86% dividend per share growth rate is an obvious outlier and (vi) with the forecast of declining dividend payouts, dividend growth will obviously lag earnings growth. Exhibit 33 at 15-16. The Company rejected the use of book value per share growth estimates because stocks do not trade at constant market-to-book ratios.

Staff defended the use of several estimates of growth rates on the ground that investors as a group do not utilize a single growth estimate when they price a utility's stock. Staff criticized the Company's reliance on a single measure of growth, earnings per share, as being inconsistent with the reality that returns from stock investment in utilities largely come from dividends

[17] The Company was referring to the DCF assumption (in its constant growth form) that with a constant return on book common equity and a constant dividend payout ratio, a firm's earnings per share, dividends per share and book value per share will grow at the same constant rate, absent external financing. Exhibit 9 at 61-62.

growth and because price appreciation is not a dominant contributor to the returns that investors accrue from utility stocks.

Staff maintained in addition that Professor Gordon merely compared the performance of expected growth in earnings with past growth rates in earnings, dividends and retention, without offering any evidence on whether forecasts of dividend per share growth or book value per share growth are inferior compared to the forecast of earnings per share growth. Specifically regarding the validity of using book value per share growth estimates, Staff argued that just as stocks do not trade at constant market value-to-book value ratios, the reality is that the price-earnings multiple does not remain constant over time either.

We find that the use of growth measures in the DCF calculation such as forecasted dividends per share and book value per share growth, in addition to expected growth in earnings per share, is appropriate. The Company agreed in its direct testimony that measures of growth other than earnings per share, including projected dividends per share growth, are, in general, valid indicators of growth. The Commission has long relied on measures of growth other than earnings per share in applying the DCF method. *Verizon New Hampshire*, Order No. 24,265, 89 NH PUC 17, 38-39 (January 16, 2004) (Commission precedent reflects the inclusion of dividends in order to produce an accurate return on equity estimate because the use of any one measure of growth alone excludes information we believe investors consider in making their investment decisions); *Pennichuck Water Works, Inc.*, *supra*, 78 NH PUC 621, 628; see *EnergyNorth Natural Gas, Inc.*, Order No. 20,304, 76 NH PUC 690, 694 (1991) (Commission was persuaded that "some" acknowledgement of the role of earnings in support of dividends was appropriate in the calculation of the expected growth rate). On the record in this case, we do not find there is a sufficient reason to depart from this practice. Staff's expert affirmed that investors

as a group do not utilize a single growth estimate when they price a utility's stock and stated that returns from utility stock investments largely come from dividends growth rather than stock price appreciation. Even in the context of the particular circumstances of the Company's proxy group, we are not persuaded that the sole reliance on earnings per share growth is reasonable. First, we do not believe that stock price appreciation is the sole determinant of investors' return and note that dividends are an important determinant of investors' returns from utility stocks. Second, we also note that the DCF assumption of a constant price to earnings ratio does not hold in reality, and sole reliance on earnings growth is inappropriate.

The Company argued that dividends growth estimates are suspect because they are based on the forecast of a single analyst, Value Line, and not on a consensus of analysts. We agree that a consensus forecast is generally preferable to a forecast by a single analyst. However, although Value Line is the only firm currently providing dividends per share forecasts, it is a well respected firm and we are unwilling to reject the use of a growth measure directly related to the traditional DCF calculation simply because no other firms provide a forecast of dividends growth. We also note that even though Staff relied on dividends and book value forecasts, the averaging calculations involved in Staff's application of the DCF method provides significant emphasis to forecasted earnings growth. Staff's reliance on all three forecasts is reasonable, as it recognizes that investors as a group do not utilize a single growth estimate.

The Company also argued that the 2.86% dividend per share growth rate relied on by Staff is an outlier and therefore dividends growth should not be used. But as Staff had indicated, the same argument would imply even more emphatically that the Zachs earnings growth forecast relied upon by Staff should be eliminated from consideration. See Day 2 Tr. at 22. We do not accept this argument. We agree with Staff that given the prominence of dividends in the DCF

construct, it is inappropriate to completely ignore dividends growth forecasts in estimating the growth component. Finally, Staff's statistical outlier-screening approach is inclusive enough that it does not rule out the exclusion of a specific proxy group company from consideration if it is the case that the company's dividends growth expectation drives such exclusion.

For these reasons, we find that Staff's use of several measures of growth in the estimation of the DCF growth component is reasonable. Despite their differences over the choice of proxy group and how best to apply the DCF method, the Company's and Staff's DCF results are generally similar to one another, apart from the Company's proposed leverage and flotation cost adjustments: the Company's initial DCF cost of equity estimate was 9.11% compared to the Staff's initial estimate of 9.01%, and the Company's updated DCF estimate was 9.77% compared to Staff's updated estimate of 9.33%.

We find Staff's recommended statistical outlier-determination approach to be generally reasonable as it allows the elimination of a proxy company that may be statistically unrepresentative of National Grid NH. However, rather than *individually* subjecting the three traditional DCF approaches to this criterion, we apply the same criterion to the *averages* of the estimates resulting from those approaches.

The table below, which is based on Attachment XI of Exhibit 51, helps explain our modification. Instead of applying the outlier-screening criteria to the individual DCF estimations, i.e., columns 2, 3 and 4, we apply it to the averages of the company-wide estimates in columns 2, 3 and 4, which are reported in column 5.[18] This approach is superior not only because the resulting cost of equity estimate allows reliance on the same group of proxy companies across all methods and is thus consistent, but also because such an approach

[18] As an example, the number associated with Atmos Energy in column 5, i.e., 9.77%, is the average of the other three estimates associated with the same company, i.e. 9.03%, 9.75% and 10.53%.

potentially produces a more inclusive and yet reasonable application of the outlier screening criteria.

When Staff's recommended outlier screening criteria is applied to column 5, only Piedmont Natural Gas is eliminated for the purpose of estimating the cost of equity, as indicated in the shaded cell in Column 5 of the table. While the higher bound for the inclusion of a company is 12.14%, Piedmont Natural Gas produces an estimate of 12.34%. The averages for the rest of the companies are all within the band of mean plus/minus 2 times the standard deviation, i.e. 7.74% to 12.14%. See column 5.

Company	**Average of EPS, DPS, and BPS growth rates**	**br and sv**	**EPS growth rates**	**Average of the three methods**
Column 1	*Column 2*	*Column 3*	*Column 4*	*Column 5*
Atmos Energy	9.03%	9.75%	10.53%	9.77%
Laclede Group	8.11%	12.42%	9.44%	9.99%
Nicor Inc.	8.50%	10.12%	9.97%	9.53%
Northwest Nat. Gas	8.81%	9.75%	9.93%	9.50%
Piedmont Natural Gas	11.11%	8.63%	17.29%	**12.34%**
Southwest Gas	8.73%	8.76%	10.61%	9.37%
WGL Holdings Inc.	8.72%	8.93%	9.55%	9.07%
Average	*9.00%*	*9.77%*	*11.05%*	*9.94%*
Average plus 2*SD				**12.14%**
Average minus 2*SD				**7.74%**
Cost of Equity estimate				***9.54%***

Applying Staff's recommended outlier-screening approach to column 5, we thus find that the average estimate for the cost of equity is 9.54%, a figure which we conclude is a reasonable result using the DCF method.

6. Effect of Market Turmoil on DCF Result

The Company attributed the increase in its recommended ROE, from 11.5% in its direct testimony to 12.25% in its rebuttal testimony, to changed circumstances, particularly the turmoil and volatility in the capital markets. In addition, the Company argued that Staff's ROE

recommendation reflected a downward bias that was inappropriate because it did not reflect the increased risks of common stocks in the market. The Company stated that there has been a flight to quality in the capital markets, but insisted that the flight was toward very low risk Treasury obligations, driving their yields down, and not toward utility stocks. See e.g., Day 1 Tr. at 135, 144.

Staff agreed that there has been a great deal of turmoil in the financial markets but argued that its DCF estimates already reflect investor expectations about how volatility impacts the cost of equity, as these expectations are reflected in stock prices and growth expectations. In Staff's view, the volatility in the stock prices of the proxy group companies is important for purposes of estimating the cost of equity, rather than the volatility associated with the market generally. Staff stated that the volatility associated with the gas proxies is not as high as the volatility associated with the market as a whole, noting that the Value Line-reported betas for the Company's and Staff's had trended downward from when the pre-filed testimony was written to the time of hearing, indicating that there is relatively low recent volatility associated with the proxy stocks. The OCA made similar arguments on this point. To Staff, the stability in the DCF cost of equity estimates is consistent with this relatively low volatility and with its observation that during bad economic times, investors are attracted to regulated utility stocks as there is a flight-to-quality and regulated stocks are considered safe-harbors.

There is no doubt that the capital markets generally have been experiencing a time of serious financial turmoil and volatility. The question we must address is what effect that has on our determination of a reasonable cost of equity based on our assessment of the risks represented by the proxy companies. We have already found that the DCF approach is an appropriate technique to use even in bad economic times and we are persuaded that the stock price and

growth forecast inputs to the DCF approach adequately reflect the turmoil and volatility relevant to the risks represented by the proxy companies. We note that both the Company's and Staff's updated DCF estimates increased from their initial estimates.

7. Adjustments for Leverage and Flotation Costs

The Company urged the Commission to adopt two adjustments to the DCF (and CAPM) calculations, both of which Staff and OCA opposed. First, the Company recommended that a leverage adjustment be made to the results in order to reflect the additional risk of introducing debt into its capital structure. The Company contended that the adjustment is not intended to transform the DCF result to a book value return and it is incorrect to suggest that a market-to-book adjustment is involved.

We do not agree that such an adjustment is appropriate. In *Pennichuck Water Works, Inc.*, *supra*, 70 PUC 850 (1985), the Commission declined to make such an adjustment, stating in part that the risk had already been accounted for by investors in the market price they are willing to pay for common stock. *Id*. at 863. In addition, Staff showed at hearing through cross examination that the leverage adjustment is overwhelmingly driven by the difference between the book value of equity and the market value of equity. Day 1 Tr. at 127, lines 5-22. We also agree with Staff that making an upward adjustment to the DCF estimate to reflect the difference the book value of equity and the market value of equity is uncalled for, as the actual financial risk facing the regulated company is the same regardless of whether the book value or the market value of the company is used to represent its capital structure. Since we conclude that the reason for a leverage adjustment, compensation to investors for financial risk not otherwise reflected in the DCF method, is not applicable to this case, we are not persuaded that a leverage adjustment is appropriate.

Second, the Company urged that we adopt an adjustment for flotation costs as reimbursement for underwriting discount and company issuance expenses associated with the sale of new common stock. According to the Company, this adjustment should be made even when, as here, issuance of common stock in the near term is not being contemplated.

Again, we do not agree that such an adjustment is appropriate. In *Pennichuck Water Works, Inc., supra*, 70 PUC 850, 862-863 (1985), the Company's expert sought to have the Commission approve a flotation cost adjustment but the Commission declined to make the adjustment because the Company had no concrete plans to issue stock in the near future. More recently, another attempt to persuade the Commission to adopt a flotation cost was made and rejected in *Public Service Company of New Hampshire, supra*, 90 NH PUC 230, 250 (2005) on the basis of arguments similar to those made here by Staff and the OCA. We find no basis in this record to depart from established practice.

8. CAPM Check of Reasonableness of DCF Result

Next we consider what other methods should be used to test the reasonableness of the DCF result. The Company performed an RP calculation and a CAPM calculation but did not estimate a reasonable range for the cost of equity. Staff did not perform an RP calculation but used two variations of the CAPM approach and did estimate a reasonable range for the cost of equity. We will not address the Company's RP calculation as a possible check since it is important to provide a comparison based on generally consistent methods. See *Public Service Company of New Hampshire*, 90 NH PUC 230 at 250. Similarly, since the Company did not expressly determine a range of reasonable estimates, we do not apply Staff's method for estimating a range of reasonable estimates as a possible check.

Since the Commission has recognized that CAPM's theoretical applicability has been established, we will use the CAPM approach as a check. *Id*. Using the proxy groups, growth calculations, risk-free rate, risk and other assumptions in each witnesses' analysis, the Company arrived at an indicated cost of equity, based on the CAPM method, of 13.91% and including leverage, size and flotation cost adjustments and Staff estimated 7.08% based on an analysis applicable to all Value Line stocks and 8.48% based on an analysis applicable to all dividend paying Value Line stocks.

As we have already indicated, we do not accept the adjustments for leverage and flotation costs.[19] We also note that it is appropriate to consider the risk-free rate to be the market yield on the 10-year Treasury note as observed over the recent past. It is also important that the beta associated with the proxy group be current. We find it appropriate to use the latest available information on Value Line betas for the proxy companies, which indicated that the average beta for the Company's proxy group was 0.70.[20] Day 2 Tr. at 50. Even accepting the other premises of the Company's CAPM estimation, the CAPM estimate of cost of equity turns out to be approximately 9.92%,[21] which reasonably confirms the validity of the 9.54% DCF-derived ROE figure.

[19] For purposes of its CAPM calculation, the Company made an upward adjustment to reflect the small size of the Company. In 1985, the Company's expert argued for such an adjustment on behalf of Pennichuck Water Works, Inc. The Commission rejected the use of an adjustment for size in that case, see *Pennichuck Water Works, Inc., supra*, 70 NH PUC 850 at 862-863, and we find the evidence for making such an adjustment no more persuasive today. Accordingly we do not accept such an adjustment.

[20] Attachment PRM-27 of the Company's rebuttal testimony, Exhibit 33 at 38, reports the beta as 0.81, which was based on information current as of September 12, 2008.

[21] With a risk-free rate at 2.39% as recommended by Staff (see last page of Exhibit 51), average beta for the Company's proxy of 0.70, and market return at 13.14% (imputed from Attachment PRM-21, Mr. Moul's Rebuttal Testimony, Exhibit 33 at 30), the CAPM estimate of the cost of equity is 2.39 *plus* 0.70 times (13.14 - 2.39), i.e., 9.92%.

C. Conclusion

A 9.54% ROE, in combination with the provisions in the partial settlement agreement, results in a revenue requirement increase of approximately $5.5 million. The calculation of the revenue requirement increase and allocation between delivery and supply charges can be found in Attachment A of this Order. We find, for the reasons set forth herein, that this increase in the revenue requirement will result in just and reasonable rates pursuant to RSA 378:28.

Based upon the foregoing, it is hereby

ORDERED, that the partial settlement is approved and the Company's allowed return on common equity shall be 9.54%; and it is

FURTHER ORDERED, that permanent rates in accordance with this Order commence on July 1, 2009, on a service-rendered basis; and it is

FURTHER ORDERED, that the Company shall file a compliance tariff with the Commission on or before June 12, 2009 in accordance with N.H. Admin. Rules Puc 1603.05 that includes reconciliation between temporary and permanent rates; and it is

FURTHER ORDERED, that the May 1, 2009 date, by which the Company and New Hampshire Legal Assistance were to meet pursuant to the partial settlement agreement to discuss the Company's collection activities and uncollectibles rate, shall be extended until July 15, 2009; and it is

FURTHER ORDERED, that the Company shall submit an accounting of its rate case expense in accordance with the partial settlement agreement.

By order of the Public Utilities Commission of New Hampshire this twenty-ninth day of May, 2009.

Thomas B. Getz	Graham J. Morrison	Clifton C. Below
Chairman	Commissioner	Commissioner

Attested by:

Lori A. Davis
Assistant Secretary

ENERGYNORTH NATURAL GAS, INC d/b/a NATIONAL GRID NH
Calculation of Revenue Requirement

ATTACHMENT A

		12 Months Ending June 30, 2007	Pro Forma Adjustments	Pro Forma Test Year	Delivery	Supply	Supply Breakdown: Production & Storage	Miscellaneous Gas Costs	Bad Debts	Working Capita	Gas Costs	Total
1	Operating Revenues	176,520,190	4,339,111	180,859,301	43,468,393	137,390,907	1,040,983	773,614	3,414,395	(952,315)	133,114,231	137,390,907
2												
3	Sales Revenues			178,812,382	42,224,238	136,588,144	1,030,855	(19,022)	3,414,395	(952,315)	133,114,231	136,588,144
4	Late Payment Revenues			2,046,919	1,244,155	802,764	10,128	792,636				802,764
5												
6												
7	Operation & Maintenance Expenses	156,342,800	2,625,071	158,967,872	20,330,802	138,637,068	1,324,280	784,162	3,414,395	-	133,114,231	138,637,068
8												
9	Depreciation	8,824,109	(2,133,397)	6,690,712	6,515,197	175,518	161,881	13,637	0	0	0	175,518
10												
11	Amortization	-	-	-	0	0						-
12												
13	Loss from Disposition of Property	113,812	(113,812)	-	0	0						-
14												
15	Taxes Other Than Income Taxes	3,762,548	45,540	3,808,087	3,621,136	186,951	179,986	6,965	0	0	0	186,951
16												
17	Total Operating Revenue Deductions	169,043,269	423,402	169,466,671	30,467,135	138,999,536	1,666,147	804,764	3,414,395	-	133,114,231	138,999,536
18												
19												
20	Operating Income Before Income Taxes	7,476,921	3,915,709	11,392,630	13,001,258	(1,608,629)	(625,164)	(31,150)	-	(952,315)	-	(1,608,629)
21												
22	State Income Taxes	194,223	340,602	534,825								
23												
24	Federal Income Taxes	1,449,455	565,576	2,015,031								
25												
26	Total Income Taxes	1,643,678	906,178	2,549,855	3,298,581	(748,725)	(348,732)	(14,067)	-	(385,926)	-	(748,725)
27												
28	Operating Income After Federal & State Ir	5,833,244	3,009,531	8,842,775	9,702,677	(859,904)	(276,432)	(17,083)	-	(566,390)	-	(859,904)
29												
30												
31	Rate Base	148,037,338	(2,128,017)	145,909,321	140,239,771	5,669,552	1,822,580	112,631	-	3,734,340	-	5,669,552
32												
33												
34	Rate of Return	3.94%		6.06%								
35												
37	**Calculation of Final Revenue Requirement based upon approved ROE.**											
38												
39												
40	Approved ROE			9.54%	9.54%	9.54%	9.54%	9.54%	9.54%	9.54%	9.54%	9.54%
41	Calculated Rate of Return (Line 64)			8.28%	8.28%	8.28%	8.28%	8.28%	8.28%	8.28%	8.28%	8.28%
42	Pre-Tax Rate of Return (Line 64)			11.53%	11.53%	11.53%	11.53%	11.53%	11.53%	11.53%	11.53%	11.53%
43												
44	Operating Revenues (Line 1)			180,859,301	43,468,393	137,390,907	1,040,983	773,614	3,414,395	(952,315)	133,114,231	137,390,907
45	Operating Income after Federal & State Taxes (Line 28)			8,842,775	9,702,677	(859,904)	(276,432)	(17,083)	-	(566,390)	-	(859,904)
46	Tax Effect			1.6814	1.6814	1.6814	1.6814	1.6814	1.6814	1.6814	1.6814	1.6814
47												
48	Pro forma Rate Base (Line 31)			145,909,321	140,239,771	5,669,552	1,822,580	112,631	-	3,734,340	-	5,669,552
49	Final Rate Year Operating Income After Federal & State Income Tax (Line 48*Line 41)			12,081,292	11,611,853	469,439	150,910	9,326	-	309,203	-	469,439
50												
51	Increase Return on Rate Base (Line 49-Line 45)			3,238,517	1,909,176	1,329,343	427,341	26,409	-	875,593	-	1,329,343
52	Increase in associated State & Federal Taxes (Line 51 * (Line 46-1)			2,206,725	1,300,913	905,814	291,190	17,995	-	596,629	-	905,814
53	Tota Rate Increase (Line 51 + Line 52)			**5,445,242**	3,210,089	2,235,157	718,532	44,403	-	1,472,222	-	2,235,157
54												
55	Final Sales Revenues(Line 53+Line 3)			184,257,624	45,434,327	138,823,301	1,749,387	25,381	3,414,395	519,907	133,114,231	138,823,301
56												
57												
58												

59		Component	Component Cost	Average Cost		Pre-Tax
60	Calculation of Return on Rate Base	Ratio (%)	Rate(%)	Rate (%)	Tax Effect	ROR
61	Common	50	9.54%	4.77%	1.6814	8.02%
62	Long Term Debt	50	7.02%	3.51%		3.51%
63						
64	Total	100.00		8.28%		11.53%