

**NATIONAL GRID
RHODE ISLAND - GAS**

**ROBERT B. HEVERT
PREFILED REBUTTAL TESTIMONY
DOCKET NO. 3943
AUGUST 15, 2008**

PRE-FILED REBUTTAL TESTIMONY

OF

ROBERT B. HEVERT

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1 **I. INTRODUCTION AND TESTIMONY OVERVIEW**

2 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

3 A. My name is Robert B. Hevert. My business address is 293 Boston Post Road
4 West, Suite 500, Marlborough, Massachusetts 01752.

5 **Q. BY WHOM AND IN WHAT CAPACITY ARE YOU EMPLOYED?**

6 A. I am President of Concentric Energy Advisors, Inc. ("Concentric"). Concentric is
7 a management consulting firm specializing in financial and economic services to
8 the energy industry. In addition to providing consulting services, my
9 responsibilities at Concentric include the day-to-day management of the firm and,
10 along with other senior officers, the development of the firm's resources and
11 capabilities, the development of new business and clients, and assuring the quality
12 and control of services delivered to our firm's clients.

13 **Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND.**

14 A. I hold a Bachelors degree in Business and Economics from the University of
15 Delaware, and an MBA with a concentration in Finance from the University of
16 Massachusetts. In addition, I hold the Chartered Financial Analyst designation.

1 **Q. PLEASE DESCRIBE YOUR PROFESSIONAL BACKGROUND AND**
2 **EXPERIENCE.**

3 A. I have served as an executive and manager with other consulting firms (REED
4 Consulting Group and Navigant Consulting, Inc.), and as a financial officer of
5 Bay State Gas Company. I have provided expert testimony regarding strategic
6 and financial matters, including the cost of capital, before the state utility
7 regulatory agencies of Arkansas, Colorado, Maine, Massachusetts, Minnesota,
8 New Jersey, New Mexico, New York, Texas, Utah, Vermont and Virginia, as well
9 as the Federal Energy Regulatory Commission (“FERC”). In addition, I have
10 advised numerous energy and utility clients on a wide range of financial and
11 economic issues including both asset and corporate-based transactions. Many of
12 those assignments have included the determination of the cost of capital for
13 valuation purposes. I have included my résumé as Attachment 1 to my direct
14 testimony.

15 **Q. PLEASE STATE THE PURPOSE OF YOUR REBUTTAL TESTIMONY.**

16 A. I have been retained by National Grid RI – Gas (“National GRID” or the
17 “Company”) to respond to the direct testimony of James A. Rothschild on behalf
18 of the Division of Public Utilities and Carriers (the “Division”), filed on July 25,
19 2008, regarding the effect of the Company’s proposed Revenue Per Customer
20 (“RPC”) decoupling mechanism on its Return on Equity (“ROE”).

1 Q. PLEASE PROVIDE A BRIEF SUMMARY OF YOUR CONCLUSIONS
2 AND RECOMMENDATION.

3 A. As discussed in more detail throughout my testimony, there is no empirical basis
4 or qualitative evidence to support Mr. Rothschild's conclusion that the
5 Company's proposed RPC decoupling mechanism merits a 75 basis point
6 reduction to its authorized ROE. In fact, I found no evidence to support a
7 reduction of any magnitude. Further, the apparent premise of Mr. Rothschild's
8 recommendation -- that the essential effect of the Company's proposal would be
9 to reduce its risk profile to the degree that its cost of equity would be equivalent to
10 the cost of highly rated corporate debt -- has no practical basis or theoretical
11 validity.

12
13 My conclusions and recommendation are based on both qualitative and
14 quantitative analyses. My qualitative analyses include (1) an overview of the
15 perspective taken by credit rating agencies (in particular, Moody's) regarding
16 whether the implementation of decoupling structures result in materially
17 improved credit profiles and consequent ratings upgrades (which is the logical
18 outcome of Mr. Rothschild's position), and (2) a review of regulatory decisions
19 authorizing the implementation of decoupling mechanisms for the purpose of
20 determining the frequency and extent to which those orders included a specific
21 ROE adjustment. My quantitative analyses specifically address the issue of
22 whether investors reduce their return requirements upon the adoption of

1 decoupling structures. As discussed in more detail later herein, those analyses
2 find no evidence that return requirements decrease; in fact, it could be argued that
3 subsequent to the implementation of decoupling mechanisms, companies trade in
4 a manner that is more consistent with their proxy group counterparts. Since ROE
5 determinations are made on the basis of proxy group data, those findings indicate
6 that there is no basis for an explicit ROE adjustment owing to the implementation
7 of a decoupling mechanism.

8 **Q. PLEASE PROVIDE A BRIEF SUMMARY OF MR. ROTHSCHILD'S**
9 **RECOMMENDED ADJUSTMENT TO THE COMPANY'S RETURN ON**
10 **EQUITY IF ITS PROPOSED DECOUPLING STRUCTURE IS**
11 **IMPLEMENTED.**

12 A. Mr. Rothschild recommends that, if it were to approve the RPC decoupling
13 mechanism proposed by the Company, the Rhode Island Public Utility
14 Commission ("Commission") should reduce the Company's ROE by 75 basis
15 points.

16 **Q. ON WHAT BASIS DOES MR. ROTHSCHILD MAKE HIS**
17 **RECOMMENDATION?**

18 A. Mr. Rothschild's recommendation is based in part on his discussion of a
19 theoretical relationship between non-diversifiable risk (as applied in the Capital
20 Asset Pricing Model) and decoupling structures, although ultimately rests on his

1 unsubstantiated and rather unconventional notion that a decoupling mechanism,
2 such as that proposed by the Company, would render its cost of equity essentially
3 equivalent to the cost of highly-rated corporate debt.¹ In fact, the only factor
4 noted by Mr. Rothschild that would account for any difference in the cost rates of
5 highly rated debt and the Company's cost of equity is that while debt costs remain
6 fixed over the life of the instrument, regulatory commissions can withdraw
7 decoupling mechanisms.² As a result of that one factor, rather than advocating
8 the current 4.89 percent yield on AA-rated corporate debt noted in his testimony³,
9 Mr. Rothschild reasons that the reduction in the cost of equity should be in the
10 range of 50 to 100 basis points, or higher.⁴ Nowhere in his testimony, however,
11 does Mr. Rothschild explain how his adjustment would drop from approximately
12 500 basis points to 75 basis points as a result of that one factor, nor does he
13 explain why 75 basis points is more reasonable than 10 basis points, 50 basis
14 points, 100 basis points, or any other adjustment.

15 **Q. ASIDE FROM HIS OBSERVATION THAT THE CURRENT COST OF**
16 **AA-RATED CORPORATE DEBT IS 4.89 PERCENT, DOES MR.**

¹ Direct Testimony and Schedules of James A. Rothschild on Behalf of the Division of Public Utilities and Carriers, July 25, 2008, at 41.

² *Ibid.*, at 41. It appears then, that if regulatory commissions were bound to maintain decoupling structures, Mr. Rothschild's logic would dictate a 506 basis point adjustment (9.95% - 4.89% = 5.06%).

³ *Ibid.*, at 41.

⁴ *Ibid.*, at 41.

1 **ROTHSCHILD PROVIDE ANY QUANTITATIVE ANALYSES TO**
2 **SUPPORT HIS POSITION?**

3 A. No, he does not. Mr. Rothschild simply states it is not possible to quantify the
4 effect of decoupling on the cost of equity.⁵ Importantly, while Mr. Rothschild
5 develops a proxy group for the purposes of his cost of equity estimation,⁶ he
6 performs absolutely no review or analyses of the revenue stabilization structures,
7 including decoupling mechanisms, that currently are in place at any of those
8 companies. Consequently, his analysis is performed in isolation, without regard
9 to the companies that he uses to arrive at his 9.95 percent ROE recommendation.⁷

10 **Q. WHY IS IT INAPPROPRIATE TO DEVELOP A RECOMMENDATION**
11 **REGARDING THE EFFECT OF THE RPC DECOUPLING MECHANISM**
12 **ON THE COMPANY'S RETURN ON EQUITY WITHOUT**
13 **CONSIDERING THE PROXY COMPANIES?**

14 A. As discussed in the *Hope* and *Bluefield* risk comparability standards, the
15 Company should be provided the opportunity to earn a return that is sufficient to
16 attract capital, and is commensurate with the returns of enterprises of similar risk.⁸
17 Therefore, it is important to recognize that for the purpose of evaluating the

⁵ *Ibid.*, at 41.

⁶ *Ibid.* at 21. Please note that while Mr. Rothschild claims to have adopted Mr. Moul's proxy group, that is not the case; Mr. Rothschild's group includes ten companies, while Mr. Moul's group contains seven. Mr. Rothschild excluded New Jersey Resources, which was included in Mr. Moul's proxy group and included Equitable, Laclede, NICOR and Southwest Gas in his proxy group.

⁷ *Ibid.* at 69.

⁸ *Bluefield Waterworks & Improvement Co., v. Public Service Commission of West Virginia, et. al.*, 262 U.S. 679 (1923); *Federal Power Commission v. Hope Natural Gas Co.*, 320 U.S. 591 (1944).

1 effect, if any, of rate structures such as the RPC on the cost of equity, the relevant
2 basis of comparison is the subject company (in this case, National GRID) with the
3 decoupling structure in place *relative to the proxy group*. The fact that the
4 Company's earnings and cash flows may be affected by the RPC has no bearing
5 on the estimated cost of equity unless it can be demonstrated that (1) the
6 Company is materially less risky than the proxy group by virtue of the RPC
7 decoupling mechanism, and (2) the financial markets recognize and react to the
8 incremental effect of the mechanism. Mr. Rothschild does not address either of
9 those issues in his testimony. That is, Mr. Rothschild has provided no analysis
10 demonstrating if or how the Company would be less risky than his proxy group if
11 the RPC decoupling mechanism is implemented. Consequently, Mr. Rothschild
12 fails to consider the risk comparability standards established by the *Hope* and
13 *Bluefield* decisions.

14

1 **II. ANALYSES OF THE RELATIONSHIP BETWEEN DECOUPLING**
2 **MECHANISMS AND INVESTOR RETURN REQUIREMENTS**

3 **Q. PLEASE PROVIDE A BRIEF OVERVIEW OF THE ANALYSES YOU**
4 **PERFORMED IN ORDER TO EVALUATE THE POTENTIAL EFFECT**
5 **OF THE RPC ON THE COMPANY'S COST OF EQUITY.**

6 A. My analysis begins with a qualitative review of the revenue stabilization
7 mechanisms ("RSM"s) in place at each of Mr. Moul's proxy group companies.⁹
8 It is important to note that this analysis was not limited strictly to revenue
9 decoupling mechanisms. In that regard, based on my experience in corporate
10 valuation and due diligence activities, it is my view that investors do not associate
11 specific increments of their return requirements with specific rate structures.
12 Rather, investors are more inclined to look at the totality of revenue stabilization
13 structures in place relative to those in place at comparable companies when
14 assessing risk. Consequently, my review of RSMs includes a variety of rate
15 mechanisms.¹⁰

16
17 I then considered the perspective of rating agencies (particularly Moody's
18 Investors Service) regarding the effect of decoupling structures on credit ratings.

⁹ In my testimony, I used the same proxy group that Paul Moul used in his Pre-Filed Direct Testimony that was filed on April 8, 2008.

¹⁰ My consideration of a variety of revenue stabilization mechanisms is similar to the approach recently used by the American Gas Association. See *Revenue Decoupling and Other Non-Volumetric Rates for Natural Gas Utilities*, NARUC Staff Subcommittee on Accounting and Finance Fall Meeting, Jackson Hole, Wyoming October 9, 2007.

1 At issue is whether or not the implementation of decoupling structures so
2 differentiates the implementing companies that their credit ratings are increased
3 (and therefore, their cost of capital is decreased). My research indicates that
4 rather than generally increasing the credit ratings of companies with decoupling
5 structures, rating agencies view companies *without* some form of revenue
6 decoupling as *less likely* to maintain their credit ratings under adverse
7 circumstances.

8
9 My quantitative analyses are premised on testing Mr. Rothschild's hypothesis that
10 decoupling structures are so risk mitigating that investors materially reduce their
11 return requirements in response to the implementation of those structures. If Mr.
12 Rothschild is correct, such reduced return requirements would be reflected in
13 increased relative valuation multiples and reduced holding period returns relative
14 to the proxy group companies. To determine whether or not changes in valuation
15 multiples are associated with the implementation of decoupling mechanisms, my
16 first quantitative analysis calculated the relative Price/Book ratio¹¹ for the
17 companies in the proxy group that implemented such structures. For each of
18 those companies, I then calculated the average relative Price/Book ratio before
19 and after the implementation date. That analysis found no meaningful difference

¹¹ The relative Price/Book is the ratio of the company-specific Price/Book to the proxy group average Price/Book. Using the relative ratio enables us to control for exogenous effects that otherwise may affect the company-specific ratio. As discussed later in my testimony, I used multiple event periods in this analysis.

1 in relative valuation multiples between the pre and post-implementation periods
2 indicating that investors did not find the incremental effect of the decoupling
3 structures to be so significant that they reduced their return requirements.

4
5 My second quantitative analysis is premised on the hypothesis that if the proxy
6 companies are sufficiently similar, the holding period of a given company should
7 be highly related to the proxy group average holding period returns. If investors
8 perceive significantly lower risks for those companies with decoupling
9 mechanisms, those companies' returns would be less volatile than the proxy group
10 average and therefore would have a lower statistical relationship over the sample
11 period. Moreover, if investors view a given company as less risky post-
12 implementation, the relationship between that company's returns and the proxy
13 group average returns should be lower in the post-implementation period than it
14 was in the pre-implementation period (due to the relatively lower volatility).

15
16 My analyses indicate that for the vast majority of implementing companies, there
17 was no decrease in the relationship between company-specific returns and the
18 proxy group average return. In fact, on average the implementing companies
19 showed a higher, rather than a lower statistical relationship with the proxy group
20 average. That is, post-implementation, the adopting companies were actually
21 more comparable to the proxy group average. As with my analysis of relative
22 valuation multiples, those analytical results are consistent with the qualitative

1 evidence suggesting that decoupling structures have become the *status quo*, and
2 investors do not reduce their return requirements for those companies that
3 implement such structures.

4 **Q. DO THE PROXY GROUP COMPANIES GENERALLY HAVE SOME**
5 **FORM OF REVENUE STABILIZATION STRUCTURE IN PLACE TO**
6 **ADDRESS THE FINANCIAL IMPLICATIONS OF DECLINING USE PER**
7 **CUSTOMER?**

8 A. Yes, all seven of the proxy group companies have such mechanisms in place. It is
9 important to note that many of the proxy group companies provide substantial
10 service in more than one state; in some cases they have mechanisms in place in
11 some states, but not others. Five of the seven have mechanisms in place that
12 affect greater than 50 percent of their operations (as measured by 2006 residential
13 and commercial sales volumes, see Table 1 (below)).

1

Table 1: Percent of Revenue Subject to

2

Revenue Stabilization Mechanisms ("RSM")

Company	Percent of Residential and Commercial Throughput Subject to RSM
AGL Resources	50% +
Atmos Energy	< 50%
New Jersey Resources	50% +
Northwest Natural Gas	50%+
Piedmont Natural Gas	50% +
South Jersey Industries	50% +
WGL Holdings	<50%

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In addition to addressing declining use per customer through specific revenue stabilization mechanisms, some of the proxy group companies have addressed the issue through other rate design approaches. For example, to the extent that fixed costs can be recovered through fixed monthly customer charges that do not vary with demand levels, some of the risk associated with declining use per customer can be mitigated. All of the proxy group companies have some level of fixed customer charge and in some cases, the fixed customer charge was increased more than the variable charges specifically to address the recovery of fixed costs. In Atmos-Tennessee's 2006 rate case, for example, a revenue-neutral change was made whereby the customer charges for residential and commercial customers were effectively doubled and a corresponding decrease was made to the volumetric charges in order to more appropriately recover fixed costs.

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Also, the volumetric rate structure can be designed to mitigate risk due to declining use per customer. Typical volumetric rate structures involve charging a fixed per unit rate for each unit of gas used. An alternative rate design is the declining block rate structure, wherein the per unit rate associated with the first volume block of gas used is higher than the per unit rates for additional volume blocks. Under such a rate structure, more fixed costs are recovered through base load consumption, which is less likely to be affected by a decline in customer use.

As shown in Attachment 2, four of the seven proxy group companies employ declining block rate structures in the residential tariff of at least one of their jurisdictions to address the declining use per customer issue. The three companies that do not employ a declining block structure, Northwest Natural, Piedmont and South Jersey Gas, incorporate comprehensive rate stabilization mechanisms and weather normalization clauses across the majority of their service areas and operations, which act in the place of a declining block structure.

Based on this review, it appears that all seven of Mr. Moul's proxy companies employ tariff structures across the majority of their operations that mitigate declining use per customer, either through specific decoupling programs, high demand or customer charges, or through a declining block structure rate design. In this context, the proposed RPC is well within the range of revenue stabilization

1 structures used by the proxy group companies. Based on this review, and as
2 discussed further below, I do not believe any reduction in risk vis-à-vis the proxy
3 group is apparent and that a corresponding reduction in the Company's ROE
4 would be unreasonable and unwarranted.

5 **Q. HOW DO RATING AGENCIES VIEW THE IMPLEMENTATION OF**
6 **REVENUE STABILIZATION MECHANISMS?**

7 A. Rating agencies have become increasingly focused on the issue of declining use
8 per customer for LDCs and are looking to revenue stabilization mechanisms as a
9 solution. As noted by Moody's Investors Service ("Moody's"):

10 While [Revenue Decoupling] may have originally begun as a
11 regional concept in certain jurisdictions, it has quickly become a
12 nationwide phenomenon that will challenge regulators and gas
13 utilities alike, as they seek to correct a structural imbalance in their
14 rate design that has become increasingly difficult to ignore.¹²

15

16 Moreover, it appears that rating agencies will not necessarily upgrade the credit of
17 a utility for the approval of a decoupling mechanism; however, a company
18 without full revenue decoupling stands a greater risk of potential downgrade. For
19 example, in its June 2006, Special Report on Revenue Decoupling and Local Gas
20 Distribution Companies, Moody's stated that:

21 LDCs that have, or soon expect to have, RD [Revenue Decoupling]
22 stand a better chance than others in being able to maintain their
23 credit ratings or stabilize their credit outlook in face of adversity.

¹² *Local Gas Distribution Companies: Update on Revenue Decoupling and Implications for Credit Ratings*, Moody's, June 2006, at 6. [Clarification added.]

1 This difference between those companies that have RD and those
2 that do not will tend to be further accentuated as the credit
3 demarcation reflected through rating actions becomes more
4 evident.¹³

5

6 As a case-in-point, in March 2006, Moody's placed Southwest Gas Corporation
7 ("Southwest Gas", or "SWX", one of Mr. Rothschild's proxy companies; *see* JAR
8 Schedule 4, page 1) under review for a possible downgrade "following the
9 company's recent announcement that the Arizona Corporation Commission
10 ("ACC") issued a final decision not to adopt the company's proposed rate design
11 for balance accounts, thereby exposing it to continuing earnings risks associated
12 with weather volatility and declining customer use resulting from the effects of
13 gas conservation."¹⁴ Upon the conclusion of its review in May 2006, Moody's
14 downgraded Southwest Gas' senior unsecured debt. As Moody's explained:

15 The downgrade reflects the view that the credit measures of SWX
16 remain weak when compared with its gas utility peers in light of its
17 continued rapid growth and sensitivity to decline in earnings on
18 account of warmer than normal weather and the absence of
19 revenue decoupling in Arizona (54% of gross margins) and
20 Nevada (37% of gross margins) that would serve to protect this
21 company from weather variation and customer conservation.¹⁵

22

¹³ *Ibid.*

¹⁴ Moody's Investors Service, *Moody's Places the Baa2/Negative Outlook Senior Unsecured Debt of Southwest Gas Corporation Under Review for Possible Downgrade*, March 10, 2006. (Clarification included)

¹⁵ Moody's Investors Service, *Moody's Downgrades Senior Unsecured Debt of Southwest Gas Corporation to Baa3 from Baa2; Outlook is Stable*, May 30, 2006. (Clarification included)

1 Thus it is apparent that rating agencies increasingly view decoupling mechanisms
2 in the context of a set of revenue stabilization mechanisms, and the
3 implementation of such structures as the *status quo* for natural gas utilities. The
4 implication is that some form of revenue stabilization is expected, and companies
5 without such protection may be susceptible to negative actions from the rating
6 agencies. Importantly, while SWX was downgraded as a result of the denial of its
7 proposed decoupling mechanism, there is no instance in which a company's credit
8 rating was increased due to the implementation of a decoupling mechanism.

9 **Q. PLEASE DESCRIBE THE EMPIRICAL ANALYSES YOU PERFORMED**
10 **TO DETERMINE WHETHER EQUITY INVESTORS REACT TO THE**
11 **IMPLEMENTATION OF DECOUPLING STRUCTURES?**

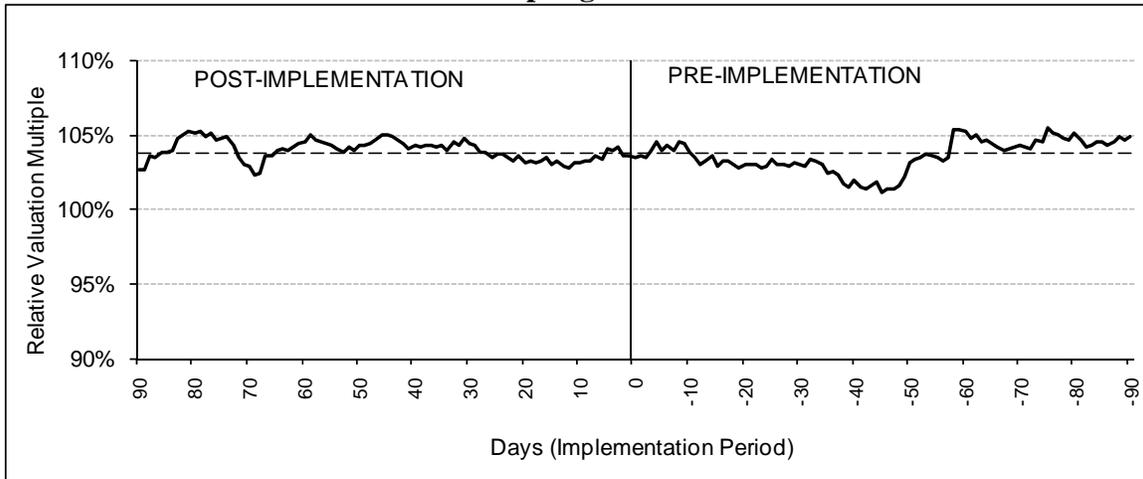
12 A. As noted earlier, my first analysis is premised on the hypothesis that if, as Mr.
13 Rothschild asserts, investors consider decoupling mechanisms to significantly
14 reduce financial and operating risks, that lower level of perceived risk would be
15 reflected in demonstrably higher valuation multiples. That is, all else remaining
16 constant, lower risk expectations should result in higher Price/Book Value ratios
17 since lower risks would result in lower return requirements and correspondingly
18 higher prices. Therefore, if investors actually reduce their return requirements as
19 a result of the incremental effects of decoupling structures, there should be a
20 meaningful increase in Price/Book ratios subsequent to the implementation date
21 for those companies that implement such structures.

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In order to test whether or not the implementation of decoupling structures is associated with changes in valuation multiples, I calculated the Price/Book ratio for the six companies in the proxy group that have implemented decoupling structures since 2003, for the ninety days before and after their respective implementation dates.¹⁶ To control for other variables that could have affected prices during the event period (*e.g.*, the ninety days prior and subsequent to the implementation dates), I divided the individual company Price/Book ratio by the proxy group average Price/Book ratio for each day of the event period (I refer to that ratio as the “relative valuation multiple”). I then calculated the average relative valuation multiple for the seven companies that implemented decoupling structures during a 180-day event period (*i.e.*, 90 days before and after implementation). The results of that analysis are presented in Chart 1 (below). As Chart 1 demonstrates, there is virtually no difference between average relative valuation multiple in the pre and post-implementation periods (denoted by the heavy dotted line); in fact, the average relative valuation multiple was approximately 103 percent in both periods.

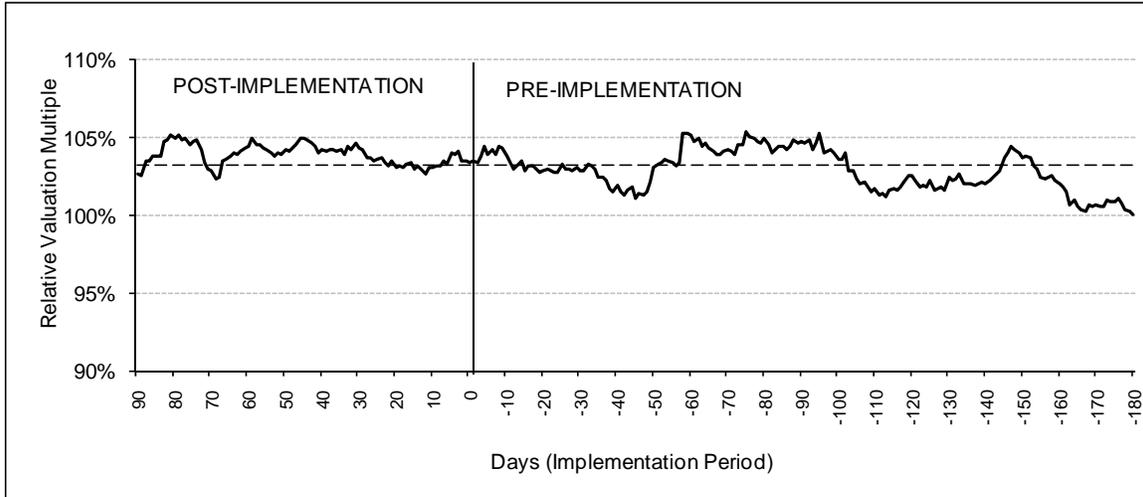
¹⁶ Those companies include NJR, NWN, PNY, SJI and WGL. The 90-day event period should be sufficient time for markets to react to the news of the implementation of decoupling structures.

1 **Chart 1: Relative Valuation Multiples Pre and Post-Implementation**
2 **of Decoupling Structures**



3
4 In order to determine whether the results of my analysis were influenced by the
5 selection of the event period, I performed the same analysis but calculated the
6 average relative valuation multiple for the 180 days prior to implementation and
7 the 90 days subsequent to implementation of the decoupling structure. In this
8 case, the longer pre-implementation period allows for the possibility that investors
9 would react to information made public during the regulatory process. As with
10 my first analysis, there was little difference in the average relative valuation
11 multiple between the pre and post-implementation periods; the average relative
12 valuation multiple was approximately 103 percent in both periods. Those results
13 again suggest that there is no reduction in return requirements associated with the
14 implementation of decoupling structures.

1 **Chart 2: Relative Valuation Multiples Pre and Post-Implementation of Decoupling**
2 **Structures**



3

4 **Q. WHAT OBSERVATIONS CAN BE MADE FROM THIS ANALYSIS?**

5 A. This analysis indicates that the implementation of decoupling structures does not
6 appear to be associated with a change in relative valuation multiples. The results
7 therefore suggest that, contrary to Mr. Rothschild's suggestion, investors do not
8 necessarily reduce their return requirements as a result of the implementation of
9 decoupling structures.

10 **Q. DID YOU PERFORM ANY OTHER EMPIRICAL ANALYSES TO**
11 **ASSESS INVESTORS' REACTIONS TO THE IMPLEMENTATION OF**
12 **DECOUPLING STRUCTURES?**

13 A. Yes. As discussed earlier, the objective in developing a proxy group is to develop
14 a group of companies that are fundamentally similar with respect to operating,
15 financial, and business risks. If the proxy companies are sufficiently comparable,

1 the periodic returns of any given proxy company should be highly related to the
2 periodic returns of the remaining proxy group. If investors perceive significantly
3 lower risk for those companies that implement decoupling structures, the
4 implementing companies' returns would be less volatile than they otherwise
5 would be, and the relationship between the individual company returns and the
6 proxy group returns would be lower. That is, if investors perceive significantly
7 lower risks as a direct result of decoupling structures, the relationship between the
8 implementing company's stock returns and the proxy group average stock price
9 return would change. Much as a lower Beta coefficient in the CAPM reflects
10 lower systematic risk, the effect of decoupling likewise would be reflected in a
11 lower slope coefficient when the subject company's returns are regressed on the
12 proxy group average return.¹⁷

13

14 In order to test whether there is a difference in returns for individual companies
15 that have implemented decoupling structures, I first modeled the weekly returns
16 based on the following specification:

17
$$r_{i,t} = a + b(r_{g,t}) + e \quad [1]$$

18 where:

19 $r_{i,t}$ = weekly return for company i

20 a = intercept term

¹⁷ Please note that the Beta coefficient in the CAPM is the slope coefficient when the subject company's returns are regressed on the market average return.

1 b = slope term

2 $r_{g,t}$ = average weekly return for proxy group

3 e_t = error term for week t

4

5 If the proxy group is appropriately structured, the intercept term (a) should be
6 zero, and the slope coefficient (b) applied to average weekly proxy group returns
7 should approach unity and be statistically significant. Lastly, the error term (e)
8 should not be serially correlated.

9

10 Based on Equation 1, I performed a regression analysis for each of the six proxy
11 group companies (ATO, NWN, NJR, PNY, SJI, WGL) that implemented
12 decoupling structures between 2003 and 2008. In order to ensure that the error
13 terms are not serially correlated, I ran the regression analyses using the Prais-
14 Winsten autocorrelation correction routine. In all cases, in the final equation, the
15 Durbin-Watson statistic indicates no serial correlation in the error terms.

16

17 As noted earlier, if investors believe that the effect of decoupling mechanisms so
18 materially reduces risks relative to the proxy group, the return volatility and,
19 therefore, the slope coefficient would decrease in the post-implementation period
20 for those companies that implement decoupling structures. If, however, investors
21 do not attribute significant risk reduction relative to the proxy group as a result of

1 the structures, the slope coefficient should not decrease in the post-
2 implementation period.

3
4 For the purposes of this analysis, I tested the hypothesis that decoupling structures
5 cause investors to reduce return requirements relative to the proxy group by
6 calculating Equation 1 in the pre and post-implementation periods for all six
7 companies that implemented decoupling structures. As shown in Table 2 the
8 slope coefficient decreased in only two (Atmos and Washington Gas Light) of the
9 six cases;¹⁸ in four of the six cases it actually increased. On average, across all six
10 companies the slope coefficient moved closer to 1.0, suggesting that on average,
11 the implementing companies returns more closely resemble the proxy group
12 subsequent to the implementation of decoupling structures. Consequently, I have
13 concluded that, contrary to Mr. Rothschild's hypothesis, investors do not reduce
14 their return requirements relative to comparable companies specifically as a result
15 of the implementation of decoupling structures.

¹⁸ The return requirements decreased for ATO and WGL, both of which have decoupled revenue and throughput for less than 50.00 percent of total throughput.

1 **Table 2: Regression Equation Slope Coefficients**

	Implementation month	Entire Period (t-stat)	Pre-Implementation (t-stat)	Post-Implementation (t-stat)
ATO	3/07	0.8079 (45.677)	0.8901 (40.265)	0.76156 (12.579)
NJR	11/06	0.9003 (44.279)	0.8815 (31.167)	0.9900 (32.046)
NWN	8/03	1.0049 (39.246)	0.8944 (11.502)	1.016 (37.469)
PNY	11/05	0.9614 (42.174)	0.8821 (31.210)	1.0134 (29.333)
SJI	11/06	0.8701 (33.535)	0.8906 (22.108)	0.9448 (23.350)
WGL	8/05	0.9610 (47.312)	1.0159 (13.998)	0.9573 (46.390)
Average		0.9176	0.9091	0.9472

2

3 **Q. PLEASE SUMMARIZE YOUR EMPIRICAL ANALYSES REGARDING**
4 **THE EFFECT OF DECOUPLING STRUCTURES ON THE COMPANY'S**
5 **COST OF EQUITY.**

6 A. First, it is important to recognize that the relevant basis of comparison is not the
7 Company's level of risk with a decoupling mechanism in place relative to its risk
8 absent the structure. There is little question that the intent of the decoupling
9 structures is to mitigate the near-certain erosion of earnings and cash flow
10 resulting from declining customer usage. At issue, therefore, is not investors'
11 perceptions of the Company's risk profile with a decoupling structure relative to
12 its risk profile absent the structure; rather the appropriate basis of comparison is
13 investors' perceptions of the Company's risk profile with the structure in place
14 relative to the proxy group.

15

1 Despite the fact that Mr. Rothschild “cannot imagine” that the market would
2 expect any less than a 50 basis point reduction to the Company’s return on equity
3 if a decoupling mechanism were to be implemented, neither Mr. Rothschild, nor I
4 have found any empirical evidence to support his position. Rather, the empirical
5 data suggest that on average, companies with decoupling mechanisms trade more,
6 not less, like the proxy companies. That conclusion is not surprising when
7 considered in the context of the breadth of revenue stabilization structures in place
8 at the proxy group companies. Nor is it surprising that Mr. Rothschild claims that
9 it is “not possible to quantify” the effect of the RPC decoupling mechanism on the
10 Company’s cost of equity; as my analyses demonstrate, there is no such effect.

11
12 **III. REASONABLENESS OF MR. ROTHSCHILD’S RECOMMENDATION**

13 **Q. HAVE YOU CONDUCTED ANY ANALYSES TO ASSESS THE**
14 **REASONABLENESS OF MR. ROTHSCHILD’S RECOMMENDED 75**
15 **BASIS POINT ADJUSTMENT?**

16 A. Yes, I have. My first analysis surveyed rate proceedings in which decoupling
17 mechanisms have been authorized to determine the frequency and extent to which
18 the ROE authorized in those proceedings was adjusted as a direct consequence of
19 the decoupling mechanisms. If Mr. Rothschild’s position is widely-
20 acknowledged and correct, I would expect to find a number of jurisdictions in
21 which the presiding commissions ordered adjustments of 75 basis points or

1 higher. Turning then to Mr. Rothschild's proposition that decoupling essentially
2 transforms the risk profile of the implementing company's equity to that of debt, I
3 calculated the number of credit "notches" that are represented by a 75 basis point
4 adjustment. In this case, if Mr. Rothschild's premise is consistent with the views
5 of rating agencies, I would expect to see ratings increases of that approximate
6 number of "notches" for companies that implement decoupling structures.¹⁹

7 **Q. PLEASE DISCUSS YOUR REVIEW OF REGULATORY DECISIONS IN**
8 **OTHER JURISDICTIONS.**

9 A. My review began with the 26 rate proceedings identified by the American Gas
10 Association ("AGA") as having adopted some form of revenue decoupling as of
11 May, 2008,²⁰ to which I added any proceedings in which decoupling mechanisms
12 have been authorized subsequent to that date. I reviewed each of the orders from
13 those cases to find what, if any, adjustment was made to the authorized ROE
14 specifically as a result of the adoption of the decoupling mechanism. The results
15 of that review are included in Attachment 3.

16 **Q. WHAT DID THAT ANALYSIS REVEAL?**

17 A. My review found that in the vast majority of cases, utility commissions have not
18 made explicit adjustments to the authorized ROEs in response to the
19 implementation of decoupling mechanisms. Of the 33 proceedings that I

¹⁹ I recognize that the cost of debt and the cost of equity do not necessarily move in lockstep.
²⁰ American Gas Association, *Natural Gas Utilities with Decoupled Rates* – May 2008.

1 reviewed for my analysis, 26 of them had no change to their authorized ROE as a
2 result of the implementation of a decoupling mechanism. Of the seven
3 proceedings in which a utility commission did order an adjustment to the ROE
4 specifically because of the decoupling implementation, five cases ordered a ten
5 basis point reduction and two authorized a 50 basis point adjustment. Both cases
6 in which a 50 basis point reduction was implemented were before the Maryland
7 Public Service Commission.

8 **Q. WHAT CONCLUSIONS DO YOU DRAW FROM THAT REVIEW?**

9 A. It is apparent that the vast majority of utility commissions that have approved
10 decoupling mechanisms (*i.e.*, 26 of 33) did not see fit to make an explicit
11 adjustment to the authorized ROE as a consequence of the decoupling structure.
12 Interestingly, of the four regulatory commissions that did make such an
13 adjustment,²¹ three authorized adjustments of only 10 basis points. In no case did
14 a regulatory commission make an adjustment as extreme as Mr. Rothschild's 75
15 basis point recommendation. Mr. Rothschild's recommendation therefore is
16 inconsistent with both investors' return requirements and the mainstream of
17 regulatory decisions.

²¹ The regulatory commissions of Arkansas, Illinois and Maryland each issued two decisions containing an ROE adjustment, and the New York Public Service Commission issued one such decision. *See* Attachment 3.

1 Q. PLEASE NOW DISCUSS YOUR ANALYSIS OF MR. ROTHSCHILD'S
2 RECOMMENDATION IN THE CONTEXT OF CURRENT BOND
3 YIELDS.

4 A. As shown in Attachment 4, as of the end of June 2008, the 30 day average
5 difference between the Moody's Aa Utility Bond Index and the Moody's Baa
6 Utility Bond Index was approximately 73 basis points (*i.e.*, approximately equal
7 to Mr. Rothschild's recommended adjustment). Assuming the indices are equally
8 distributed among their component credit ratings, this differential represents, on
9 average, six "notches" on the Moody's credit rating scale.²² Importantly, the
10 difference between the Aa and Baa ratings span a significant credit quality
11 spectrum. According to Moody's, "[o]bligations rated Aa are judged to be of
12 high quality and are subject to very low credit risk", while "[o]bligations rated
13 Baa are subject to moderate credit risk. They are considered medium-grade and
14 as such may possess certain speculative characteristics."

15
16 Thus, Mr. Rothschild's recommendation to adjust the ROE downward by 75 basis
17 points severely misjudges the market-imposed risk premia when viewed in the
18 context of credit ratings; in effect he suggests that the Company's credit rating
19 should be upgraded by six "notches." There is no circumstance of which I am
20 aware, nor has Mr. Rothschild pointed to a circumstance, in which a company's

²² The Moody's credit scale is as follows: AA, Aa, A, Baa, Ba, B, Caa, Ca, C; each ratings category is further differentiated with a 1, 2 or 3 rating.

1 credit rating was increased to such an extent in response to a rate design change.
2 In fact, as noted earlier, companies are not likely to receive a credit upgrade as a
3 result of a revenue stabilization mechanism, although they stand a greater risk of a
4 potential downgrade without one. Consequently, Mr. Rothschild's recommended
5 adjustment cannot be supported based on actual credit market data.

6 **Q. HOW DOES THAT ANALYSIS COMPORT WITH THE PREMISE OF**
7 **MR. ROTHSCHILD'S RECOMMENDATION, I.E., THAT DECOUPLING**
8 **RENDERS THE COMPANY'S COMMON EQUITY AS ESSENTIALLY**
9 **EQUIVALENT TO AA-RATED CORPORATE DEBT?**

10 A. Quite simply, it does not. If Mr. Rothschild's assertion that the adoption of a
11 decoupling mechanism substantially transforms the risks of equity is correct, the
12 same would hold for the implementing companies' debt. That is, since debt has a
13 claim on cash flows that is senior to equity holders, the adoption of a decoupling
14 mechanism would have an equivalent effect on the implementing companies'
15 credit ratings and cost of debt. However, there is no case of which I am aware in
16 which the implementation of a decoupling mechanism specifically resulted in an
17 upgrade of the corporate debt.

1 Q. PLEASE SUMMARIZE MR. ROTHSCHILD'S POSITION REGARDING
2 THE IMPLEMENTATION OF DECOUPLING MECHANISMS AND ITS
3 EFFECT ON NON-DIVERSIFIABLE RISK.

4 A. Mr. Rothschild suggests that the proposed RPC decoupling mechanism "...would
5 attenuate the correlation of overall economic growth to National GRID's earnings
6 and stock price",²³ and that "[i]t would significantly reduce the non-diversifiable
7 risks (*sic*) exposure to National GRID investors by a revenue stream that would
8 be essentially unaffected by swings in economic conditions within the service
9 territory."²⁴ Since non-diversifiable risk is measured by the Beta coefficient in
10 the Capital Asset Pricing Model ("CAPM"), according to Mr. Rothschild's
11 theory, the Beta coefficient should be lower for companies that have implemented
12 decoupling structures than for those that have not.

13 Q. DO YOU AGREE WITH MR. ROTHSCHILD'S POSITION IN THAT
14 REGARD?

15 A. No, I do not. As a preliminary matter, I disagree that decoupling mechanisms
16 address non-diversifiable risks. The CAPM considers two types of risks,
17 "unique" or "diversifiable risk, and "market" or "non-diversifiable" risk. As
18 Brealey, Myers and Allen explain,

19 The risk that potentially can be eliminated by diversification is
20 called **unique risk**. Unique risk stems from the fact that many of
21 the perils that surround an individual company are peculiar to that

²³ Direct Testimony of James A. Rothschild, at 38. [clarification added]

²⁴ *Ibid.* at 36. [clarification added]

1 company and perhaps its immediate competitors. But there is also
2 some risk that you can't avoid, regardless of how much you
3 diversify. This risk generally is known as **market risk**. Market
4 risk stems from the fact that there are economy wide perils that
5 threaten all businesses. That is why stocks have a tendency to
6 move together. And that is why investors are exposed to market
7 uncertainties, no matter how many stocks they hold.²⁵

8

9 Mr. Rothschild, however, suggests that the lost revenues associated with a
10 recession, which is a macroeconomic event, would be mitigated by the RPC
11 decoupling mechanism and as such, the mechanism serves to reduce the
12 Company's market risk. What Mr. Rothschild does not consider, however, is that
13 declining use per customer can result from factors beyond economy-wide
14 recessions and indeed may be company-specific. Even if declining use per
15 customer has a common cause among gas utilities, that segment does not
16 comprise the entire economy. Consequently, I do not agree with Mr. Rothschild's
17 conclusion that the RPC addresses non-diversifiable risk.

18

19 Putting aside that disagreement, if Mr. Rothschild is correct, the Beta coefficients
20 for those companies with decoupling mechanisms would be considerably lower
21 than the average Beta of .88 provided in Mr. Rothschild's JAR Schedule 6, Page
22 1. In fact, based on the average Beta of .88, Mr. Rothschild's average CAPM

²⁵ Richard A. Brealey, Stewart C. Meyers, Franklin Allen, Principals of Corporate Finance, 8th ed., McGraw-Hill/Irwin, 2006, at 162. Emphasis included.

1 result of 9.37 percent, the risk free rate of estimate of 4.45 percent,²⁶ and the
2 implied market risk premium of 5.59 percent,²⁷ the Beta coefficient for companies
3 with decoupling mechanisms would have to be approximately .746 in order for
4 Mr. Rothschild's 75 basis point adjustment to be reflected in market data (see
5 Table 3 (below)).²⁸

6 **Table 3: Adjusted Beta Coefficient**

Risk-free rate	4.45%
<i>Adjusted Beta Coefficient</i>	<i>.746</i>
Market Risk Premium	5.59%
Implied CAPM Result	8.62%
Mr. Rothschild's CAPM Estimate	9.37%
Difference	0.75%

7
8 Even though Mr. Rothschild's hypothesis implies a Beta of .746, the lowest Beta
9 coefficient in his proxy group is .80; only one of his ten companies has a Beta that
10 low. In fact, four of the companies have Beta coefficients of .85, three have Beta
11 coefficients of .90, and two have Beta coefficients of .95,²⁹ and the average Beta
12 of Mr. Rothschild's proxy group companies that have implemented some form of
13 decoupling mechanism is .857. Consequently, Mr. Rothschild's own data does

²⁶ Direct Testimony of James A. Rothschild, at 31.

²⁷ $5.59\% = (9.37\% - 4.45\%) / 88\%$

²⁸ Please note that in relying on Mr. Rothschild's data, I am not endorsing his CAPM inputs or results.

²⁹ JAR Schedule 4, page 3.

1 not support his position that decoupling mechanisms reduce non-diversifiable
2 risk.

3

4 **IV. SUMMARY AND CONCLUSIONS**

5 **Q. PLEASE SUMMARIZE YOUR CONCLUSIONS AND**
6 **RECOMMENDATION.**

7 A. As discussed throughout my testimony, there is no evidence, empirical or
8 otherwise, that can support Mr. Rothschild's assertion that a 75 basis point
9 adjustment to the Company's cost of equity if the RPC is implemented is just and
10 reasonable. To the contrary, market evidence indicates that investors do not
11 adjust their return requirements as a result of the implementation of such
12 structures. In large measure, that lack of reaction appears to be due to the fact
13 that, as Moody's pointed out, such mechanisms are becoming the *status quo*.
14 Moreover, the vast majority of utility commissions that have addressed this issue
15 have imposed little or no adjustment; none have included an adjustment as
16 excessive as Mr. Rothschild's recommendation. Consequently, it is my view that
17 there should be no adjustment to the Company's ROE if the RPC decoupling
18 mechanism is adopted.

19 **Q. DOES THIS COMPLETE YOUR TESTIMONY?**

20 A. Yes, it does.

Robert B. Hevert, CFA
President

Mr. Hevert is an economic and financial consultant with broad experience in the energy industry. He has an extensive background in the areas of corporate strategic planning, energy market assessment, corporate finance, mergers, and acquisitions, asset-based transactions, asset and business unit valuation, market entry strategies, strategic alliances, project development, feasibility and due diligence analyses. Mr. Hevert has significant management experience with both operating and professional services companies.

REPRESENTATIVE PROJECT EXPERIENCE

Financial and Economic Advisory Services

Retained by numerous leading energy companies and financial institutions throughout North America to provide services relating to the strategic evaluation, acquisition, sale or development of a variety of regulated and non-regulated enterprises. Specific services have included: developing strategic and financial analyses and managing multi-faceted due diligence reviews of proposed corporate M&A counter-parties; developing, screening and recommending potential M&A transactions and facilitating discussions between senior utility executives regarding transaction strategy and structure; performing valuation analyses and financial due diligence reviews of electric generation projects, retail marketing companies, and wholesale trading entities in support of significant M&A transactions.

Specific divestiture-related services have included advising both buy and sell-side clients in transactions for physical and contractual electric generation resources. Sell-side services have included: development and implementation of key aspects of asset divestiture programs such as marketing, offering memorandum development, development of transaction terms and conditions, bid process management, bid evaluation, negotiations, and regulatory approval process. Buy-side services have included comprehensive asset screening, selection, valuation and due diligence reviews. Both buy and sell-side services have included the use of sophisticated asset valuation techniques, and the development and delivery of fairness opinions.

Specific corporate finance experience while a Vice President with Bay State Gas included: negotiation, placement and closing of both private and public long-term debt, preferred and common equity; structured and project financing; corporate cash management; financial analysis, planning and forecasting; and various aspects of investor relations.

Representative non-confidential clients have included:

- Conectiv generation asset divestiture
- Eastern Utilities Associates (prior to acquisition by National Grid, PLC) generation asset divestiture
- Niagara Mohawk – sale of Niagara Mohawk Energy
- Potomac Electric Company generation asset divestiture

Representative confidential engagements have included:

- Buy-side valuation and assessment of merchant generation assets in Midwestern U.S.
- Buy-side due diligence and valuation of wholesale energy marketing companies in Eastern and Midwestern U.S.
- Buy-side due diligence of natural gas distribution assets in Northeastern U.S.

- Financial feasibility study of natural gas pipeline in upper Midwestern U.S.
- Financial valuation of natural gas pipeline in Southwestern U.S.

Regulatory Analysis and Ratemaking

On behalf of electric, natural gas and combination utilities throughout North America, provided services relating to energy industry restructuring including merchant function exit, residual energy supply obligations, and stranded cost assessment and recovery. Also performed rate of return and cost of service analyses for municipally owned gas and electric utilities. Specific services provided include: performing strategic review and development of merchant function exit strategies including analysis of provider of last resort obligations in both electric and gas markets; and developing value optimizing strategies for physical generation assets.

Representative engagements have included:

- Performing rate of return analyses for use in cost of service analyses on behalf of municipally owned gas and electric utilities in the Southeastern and Midwestern U.S.
- Developing merchant function exit strategies for Northeastern U.S. natural gas distribution companies
- Developing regulatory and ratemaking strategy for mergers including several Northeastern natural gas distribution companies

Litigation Support and Expert Testimony

Provided expert testimony and support of litigation in various regulatory proceedings on a variety of energy and economic issues including the proposed transfer of power purchase agreements, procurement of residual service electric supply, the legal separation of generation assets, and specific financing transactions. Services provided also included collaborating with counsel, business and technical staff to develop litigation strategies, preparing and reviewing discovery and briefing materials, preparing presentation materials and participating in technical sessions with regulators and intervenors.

Energy Market Assessment

Retained by numerous leading energy companies and financial institutions nationwide to manage or provide assessments of regional energy markets throughout the U.S. and Canada. Such assessments have included development of electric and natural gas price forecasts, analysis of generation project entry and exit scenarios, assessment of natural gas and electric transmission infrastructure, market structure and regulatory situation analysis, and assessment of competitive position. Market assessment engagements typically have been used as integral elements of business unit or asset-specific strategic plans or valuation analyses.

Representative engagements have included:

- Managing assessments of the NYPOOL, NEPOOL and PJM markets for major North American energy companies considering entering or expanding their presence in those markets
- Assessment of ECAR, MAPP, MAIN and SPP markets for a large U.S. integrated utility considering acquisition of additional electric generation assets
- Assessment of natural gas pipeline and storage capacity in the SERC and FRCC markets for a major international energy company

Resource Procurement, Contracting and Analysis

Assisted various clients in evaluating alternatives for acquiring fuel and power supplies, including the development and negotiation of energy contracts and tolling agreements. Assignments also have included developing generation resource optimization strategies. Provided advice and analyses of transition service

power supply contracts in the context of both physical and contractual generation resource divestiture transactions.

Business Strategy and Operations

Retained by numerous leading North American energy companies and financial institutions nationwide to provide services relating to the development of strategic plans and planning processes for both regulated and non-regulated enterprises. Specific services provided include: developing and implementing electric generation strategies and business process redesign initiatives; developing market entry strategies for retail and wholesale businesses including assessment of asset-based marketing and trading strategies; and facilitating executive level strategic planning retreats. As Vice President, Energy Ventures, of Bay State was responsible for the company's strategic planning and business development processes, played an integral role in developing the company's non-regulated marketing affiliate, EnergyUSA, and managed the company's non-regulated investments, partnerships and strategic alliances.

Representative engagements have included:

- Developing and facilitating executive level strategic planning retreats for Northeastern natural gas distribution companies
- Developing organization and business process redesign plans for municipally owned gas/electric/water utility in the Southeastern U.S.
- Reviewing and revising corporate merchant generation business plans for Canadian and U.S. integrated utilities
- Advising client personnel in development of business unit level strategic plans for various natural gas distribution companies

PROFESSIONAL HISTORY

Concentric Energy Advisors, Inc. (2002 – Present)

President

Navigant Consulting, Inc. (1997 – 2001)

Managing Director (2000 – 2001)

Director (1998 – 2000)

Vice President, REED Consulting Group (1997 – 1998)

REED Consulting Group (1997)

Vice President

Bay State Gas Company (1987 – 1997)

Vice President, Energy Ventures and Assistant Treasurer

Boston College (1986 – 1987)

Financial Analyst

General Telephone Company of the South (1984 – 1986)

Revenue Requirements Analyst

EDUCATION

M.B.A., University of Massachusetts at Amherst, 1984
B.S., University of Delaware, 1982

DESIGNATIONS AND PROFESSIONAL AFFILIATIONS

Chartered Financial Analyst, 1991
Association for Investment Management and Research
Boston Security Analyst Society

PUBLICATIONS/PRESENTATIONS

Has made numerous presentations throughout the United States and Canada on several topics, including:

- Generation Asset Valuation and the Use of Real Options
 - Retail and Wholesale Market Entry Strategies
 - The Use Strategic Alliances in Restructured Energy Markets
 - Gas Supply and Pipeline Infrastructure in the Northeast Energy Markets
 - Nuclear Asset Valuation and the Divestiture Process
-

AVAILABLE UPON REQUEST

Extensive client and project listings, and specific references.

Declining Use Per Customer Mitigation for Proxy Group Companies

COMPANY - JURISDICTION	REVENUE STABILIZATION ADJUSTMENT MECHANISM	WEATHER NORMALIZATION ADJUSTMENT	CUSTOMER CHARGE	VOLUMETRIC RATE STRUCTURE	OTHER SIGNIFICANT ADJUSTMENTS
AGL- TN	NO	YES	Residential \$12/mo; Small Commercial and Industrial \$29/mo; Medium Volume \$75/mo; Commercial and Industrial Large Volume \$300/mo.	Declining block rate structure	Purchased Gas Adjustment Provision
AGL- NJ	NO	YES	Residential \$7.55/mo; General Delivery \$ 16.15/mo; Large Volume Demand \$475.17/mo.	Declining block rate structure	Basic Gas Supply Service Charge – Rider “A” (BGSS) Revenue stabilization for standard offer losses, clean energy program losses and remediation costs

Sources: Each utility’s rate tariff plus rate case documents and other sources specifically noted.

Declining Use Per Customer Mitigation for Proxy Group Companies

COMPANY - JURISDICTION	REVENUE STABILIZATION ADJUSTMENT MECHANISM	WEATHER NORMALIZATION ADJUSTMENT	CUSTOMER CHARGE	VOLUMETRIC RATE STRUCTURE	OTHER SIGNIFICANT ADJUSTMENTS
AGL-MD	NO	NO	Residential \$4/mo; Commercial \$7.25/mo; Industrial \$60/mo.	Flat rate	Purchased Gas Adjustment Clause - Gas
AGL- FL	NO	NO	General Service \$8.mo; General Service 100- \$9.50/mo.	Flat rate	Purchased Gas Adjustment – Rider A

Sources: Each utility's rate tariff plus rate case documents and other sources specifically noted.

Declining Use Per Customer Mitigation for Proxy Group Companies

COMPANY - JURISDICTION	REVENUE STABILIZATION ADJUSTMENT MECHANISM	WEATHER NORMALIZATION ADJUSTMENT	CUSTOMER CHARGE	VOLUMETRIC RATE STRUCTURE	OTHER SIGNIFICANT ADJUSTMENTS
AGL-GA	100% straight fixed-variable rates for distribution costs. All distribution margin is recovered via: (a) customer charge (customer connection costs, including the meter, regulator, service line and meter reading expenses, and (b) a capacity charge (all common distribution costs of providing delivery service based on a customer's contribution to peak demand).	YES - <i>See</i> discussion of Revenue Stabilization Adjustment Mechanism	No customer service charge.	Straight fixed variable rate design. Customer pays 1/12 of annual fixed charges and a predetermined percent of demand day annual capacity charges each month.	Pipeline replacement tracking mechanism. The purpose of this rider is for the Company to recover certain costs associated with the replacement of bare steel and cast iron pipe on the Company's system, first approved by <i>Commission Order dated September 3, 1998 in Docket No. 8516-U.</i>
AGL- VNG	NO	YES	Residential \$9.78/mo; General Firm Service \$12.78/mo; Industrial High Load Factor \$407.61/mo; Industrial General Firm Service \$472.54/mo	Declining block rate structure, except flat rate structure for Industrial High Load Factor	Quarterly Billing Factor incorporates Projected Purchased Gas Costs and Actual Cost Adjustments among other adjustments.

Sources: Each utility's rate tariff plus rate case documents and other sources specifically noted.

Declining Use Per Customer Mitigation for Proxy Group Companies

COMPANY - JURISDICTION	REVENUE STABILIZATION ADJUSTMENT MECHANISM	WEATHER NORMALIZATION ADJUSTMENT	CUSTOMER CHARGE	VOLUMETRIC RATE STRUCTURE	OTHER SIGNIFICANT ADJUSTMENTS
ATMOS - KY	NO	YES	Residential \$7.50/mo; Firm Non-Resid. \$20/mo; Interr./Low Priority \$220/mo.	Declining block rate structure.	Gas Cost Adjustment – Rider GCA
ATMOS - TN	NO	YES	Residential \$9/mo summer, \$12/mo winter; C&I \$24/mo; Large C&I \$200/mo. ¹	Flat per unit rate.	Purchased Gas Adjustment Rider
ATMOS - MS	An earnings-based Automatic ROE Adjustment Mechanism provides rate stabilization and virtually ensures that Atmos will recover authorized revenue within established parameters. <i>(Docket No. 92-UN-0230 Order October 1, 1992; Docket No. 05-UN-0503 Notice of Intent filed September 7, 2005, Prefiled testimony of Rebecca Buchanan filed September 7, 2005, Stipulation and Agreement filed October 3, 2005, Order October 7, 2005)</i>	YES	Residential \$6.95/mo; Intermediate Volume Service \$195.90/mo; Large Volume Service \$245.90/mo. ²	Flat per unit rate.	Purchased Gas Adjustment Rider

¹ In 2005/06 rate case, Atmos-Tennessee proposed to redistribute normalized revenue between the customer charges and the volumetric charges. The proposal involved increasing the residential customer charge from \$6/mo to \$9/mo summer and \$12/mo winter and increasing the C&I customer charge from \$12/mo to \$24/mo. Atmos' proposal is revenue neutral, so a corresponding decrease in the volumetric rates would also occur. While an official order has not yet been filed, during the October 26, 2006 hearing the proposed rate structure was approved. *(TRA Docket No. 05-00258 Direct Testimony of Patricia J. Childers dated July 17, 2006, Director Miller's Motion sent to Chairman Kyle dated October 25, 2006, Transcript October 26, 2006, Tariff filed with TRA on November 28, 2006 and November 29, 2006.)*

² In 2005 rate case, Atmos-Mississippi redesigned rates to include a fixed customer charge recognizing that the revenues produced would vary less as a result of changes in the amount of volumes used. *(Docket No. 05-UN-0503 Notice of Intent filed September 7, 2005, Prefiled testimony of Rebecca Buchanan filed September 7, 2005, Stipulation and Agreement filed October 3, 2005, Order October 7, 2005)*

Sources: Each utility's rate tariff plus rate case documents and other sources specifically noted.

Declining Use Per Customer Mitigation for Proxy Group Companies

COMPANY - JURISDICTION	REVENUE STABILIZATION ADJUSTMENT MECHANISM	WEATHER NORMALIZATION ADJUSTMENT	CUSTOMER CHARGE	VOLUMETRIC RATE STRUCTURE	OTHER SIGNIFICANT ADJUSTMENTS
ATMOS - LA	In May 2006 both divisions were permitted an earnings-based revenue stabilization clause (RSC) through June 1, 2009. Rates will be adjusted annually to achieve the authorized ROE (subject to a dead band for TLA). Any necessary increases will first be applied to the customer charge (limit to \$0.50 increase for residential, proportional for other customer classes), then any additional increase is applied to the commodity charge. Any necessary decrease will come from the commodity charge. <i>(Order No. U-28814 Consolidated (Corrected) May 25, 2006).</i>	YES	TLA Residential \$11/mo; TLA General \$11/mo; TLA Large General \$134.38/mo; LGS Residential \$11.50/mo; LGS General \$19.16/mo; LGS Large General \$127.78/mo. ³	Flat per unit rate.	Purchased Gas Adjustment – Rider PGA

³ The result of the annual rate adjustments to achieve the authorized ROE (i.e. rate increases are applied to the customer charge, and decreases are taken from the commodity charge) is that over time more revenues will come from fixed customer charges and less from variable commodity charges making revenues less dependent upon customer use. *(Order No. U-28814 Consolidated (Corrected) May 25, 2006)*

Sources: Each utility's rate tariff plus rate case documents and other sources specifically noted.

Declining Use Per Customer Mitigation for Proxy Group Companies

COMPANY - JURISDICTION	REVENUE STABILIZATION ADJUSTMENT MECHANISM	WEATHER NORMALIZATION ADJUSTMENT	CUSTOMER CHARGE	VOLUMETRIC RATE STRUCTURE	OTHER SIGNIFICANT ADJUSTMENTS
ATMOS - TX (west)	NO	YES	Amarillo Residential \$9.50/mo; Amarillo Commercial \$15/mo; Amarillo Small Industrial \$50/mo; Lubbock Residential \$9.95-\$10.66/mo; Lubbock Commercial \$15.75-\$17.99/mo; Lubbock Small Industrial \$68.96-\$93.82/mo; West Texas Residential \$9.59/mo; West Texas Commercial \$17.09/mo; West Texas Industrial \$85.17/mo. ⁴	Flat per unit rate except for industrial which has a declining block rate structure.	Gas Cost Adjustment Rider

⁴ In Amarillo's 2003 rate case, the increase was primarily comprised of an increase in monthly customer charges and adjustments to base rates to better recover fixed costs. (*Atmos Energy Corporation 2005 10-K*)

Sources: Each utility's rate tariff plus rate case documents and other sources specifically noted.

Declining Use Per Customer Mitigation for Proxy Group Companies

COMPANY - JURISDICTION	REVENUE STABILIZATION ADJUSTMENT MECHANISM	WEATHER NORMALIZATION ADJUSTMENT	CUSTOMER CHARGE	VOLUMETRIC RATE STRUCTURE	OTHER SIGNIFICANT ADJUSTMENTS
ATMOS - TX (mid)	In May 2006 Atmos proposed a Revenue Stabilization Adjustment (to account for changes in normalized use per customer), a weather normalization adjustment (to account for changes in weather), and a rate design which increases the customer charge and first block rate while decreasing the higher block rates. A partial settlement was approved on July 6, 2006 whereby Atmos would be allowed to implement an interim WNA. The remainder of the case was settled in June, 2008. At that time the WNA was approved, as was a Conservation and Energy Efficiency Tariff. However, the Revenue Recovery Mechanism (RRM) was not explicitly approved. <i>(Docket No. GUD 9670, Order August 15, 2006; Docket No. GUD 9762, Order June 24, 2008)</i>	As a result of the July 2006 approval of partial settlement Atmos implemented an interim WNA effective Oct. 1, 2006, but a final decision is not due until late 2007. <i>(Docket No. GUD 9670 Order July 6, 2006; Order August 15, 2006)</i>	Residential: \$14.00/mo. Commercial: \$25.00/mo. Industrial/ Transportation: \$450.00/mo.	Flat per unit rate except for industrial which has a declining block rate structure.	Gas Cost Recovery Rider
ATMOS - KS	On May 12, 2008, the Kansas Corporation Commission instituted a weather normalization component to Atmos Energy's rates. The mechanism is designed to capture the difference between test-year average margin per customer and actual average margin per customer due to weather. Both KCC staff and Atmos agreed that a more complete decoupling design should be handled in a separate proceeding. <i>(Docket D-08-ATMG-280-RTS)</i>	YES	Residential \$12.25/mo.		
ATMOS - VA	NO	YES	Residential \$6.60/mo; Small C&I \$14.50/mo; Large C&I \$167/mo.	Flat per unit rate.	Purchased Gas Adjustment Rider

Sources: Each utility's rate tariff plus rate case documents and other sources specifically noted.

Declining Use Per Customer Mitigation for Proxy Group Companies

COMPANY - JURISDICTION	REVENUE STABILIZATION ADJUSTMENT MECHANISM	WEATHER NORMALIZATION ADJUSTMENT	CUSTOMER CHARGE	VOLUMETRIC RATE STRUCTURE	OTHER SIGNIFICANT ADJUSTMENTS
ATMOS - GA	NO	YES	Residential \$7/mo; General \$12/mo; Large Volume \$25/mo.	Flat per unit rate.	Purchased Gas Adjustment Rider
ATMOS - CO	NO	NO	Residential \$9/mo; Firm Commercial \$21.50/mo; Interruptible-Small \$265/mo. (excludes Buena Vista)	Flat per unit rate.	Gas Cost Adjustment – GCA
ATMOS - MO	On March 4, 2007, the Missouri Public Service Commission passed an order establishing a more stable cost recovery mechanism for Atmos residential and Small General Service Class customers. Traditional rates remain in place for Medium and Large General Service Class customers. As of the effective date, non-gas charges are recovered through a fixed charge to each customer. <i>(Docket No.: GR-2006-0387)</i>	NO	Residential and Small General Service Class customers: \$13.92-\$20.61/mo.	Flat per unit rate.	Purchased Gas Adjustment Clause
ATMOS - IL	NO	NO	Residential \$9.90/mo; Small C&I \$25/mo; Large C&I \$100/mo.	Flat per unit rate.	Purchased Gas Cost Adjustment

Sources: Each utility's rate tariff plus rate case documents and other sources specifically noted.

Declining Use Per Customer Mitigation for Proxy Group Companies

COMPANY - JURISDICTION	REVENUE STABILIZATION ADJUSTMENT MECHANISM	WEATHER NORMALIZATION ADJUSTMENT	CUSTOMER CHARGE	VOLUMETRIC RATE STRUCTURE	OTHER SIGNIFICANT ADJUSTMENTS
ATMOS - IA	NO	NO	Residential \$7.95/mo; Commercial \$13/mo; Industrial \$1400/mo.	Declining block rate structure.	Purchased Gas Adjustment Clause
NEW JERSEY RESOURCES	Conservation Incentive Program (CIP) was established in the Board's 2006 Order in Docket No. GR05121020. The CIP program allows recovery of margin deficiency associated with non-weather related changes in customer usage and will be limited to the level of Basic Gas Supply Service Charge savings achieved. The CIP shall not operate to permit the Company to recover any portion of a deficiency that will cause the Company to earn in excess of a 10.5% return on common equity for the Annual Period. The revenues billed, or credits applied, net of taxes and assessments, through the application of the Conservation Incentive Program Rate shall be accumulated for each month of the Adjustment Period and applied against the CIP excess or deficiency from the Annual Period and any cumulative balances remaining from prior periods.	YES	Residential \$6.60/mo; General Service low load factor \$15.10/mo; General Service Demand \$47.18/mo.	Residential flat rate;	Basic Gas Supply Service Charge – Rider A (BGSS)

Sources: Each utility's rate tariff plus rate case documents and other sources specifically noted.

Declining Use Per Customer Mitigation for Proxy Group Companies

COMPANY - JURISDICTION	REVENUE STABILIZATION ADJUSTMENT MECHANISM	WEATHER NORMALIZATION ADJUSTMENT	CUSTOMER CHARGE	VOLUMETRIC RATE STRUCTURE	OTHER SIGNIFICANT ADJUSTMENTS
NORTHWEST NATURAL GAS - WA	NO	NO	Residential charge \$5/mo; Basic firm service \$10.50/mo; C&I firm service \$195.16/mo; Large volume firm service \$1300/mo.	Residential, general sales and basic firm service have a flat per unit rate; all other rates are declining block rate structures.	Purchased Gas Cost Adjustment – Schedule P
NORTHWEST NATURAL GAS - OR	Full decoupling mechanism named the “Partial Decoupling Mechanism” (Distribution Margin Normalization (DMN)) - Margins associated with differences between weather normalized usage and baseline usage for Residential and Commercial customers are collected into a deferral account. Weather normalization handled through a separate rider to the tariff. (<i>UG-143, Order No. 02-634, September 12, 2002 and UG-163, Order No. 05-934, August 25, 2005.</i>)	YES	Residential charge \$6/mo; Basic firm service \$8/mo; Commercial and Industrial firm service \$325/mo; Large volume firm service \$675/mo.	Residential, general sales and basic firm service have a flat per unit rate; all other rates are declining block rate structures.	Purchased Gas Cost Adjustment – Schedule P

Sources: Each utility’s rate tariff plus rate case documents and other sources specifically noted.

Declining Use Per Customer Mitigation for Proxy Group Companies

COMPANY - JURISDICTION	REVENUE STABILIZATION ADJUSTMENT MECHANISM	WEATHER NORMALIZATION ADJUSTMENT	CUSTOMER CHARGE	VOLUMETRIC RATE STRUCTURE	OTHER SIGNIFICANT ADJUSTMENTS
PIEDMONT - NC	Customer Utilization Tracker (CUT) which decouples the recovery of authorized margins from sales for all reasons, including conservation and weather. (The existing WNA was eliminated since it was covered in the CUT.) This program is experimental and is set to expire on Nov. 1, 2008. <i>(Per NCPSC Docket No. G-9 Sub 499; Docket No. G-21, Sub 461; Docket No. G-44, Sub 15, Nov. 3, 2005)</i>	YES - <i>See</i> discussion of Revenue Stabilization Adjustment Mechanism	Residential \$10/mo; Small General Sales Service \$22/mo; Medium General Sales Service \$75/mo; Large Volume Service \$250/mo.	Residential is a flat volumetric charge. Other service classes have flat per unit rate or the "value" service option which is a declining block rate structure. All volumetric charges are seasonal.	Purchased Gas Adjustment Clause
PIEDMONT - SC	All expenses recovered through an earnings-based Rate Stabilization mechanism that allows the company to recover/return all costs to bring it back to its allowed ROE in its most recent rate case if current margins are outside a 50 basis point dead band. This mechanism includes recovery for changes in weather, conservation and declining use per customer issues. <i>(Docket No. 2005-125-G, Order No. 2005-491, September 28, 2005, Order No. 2005-567(A), October 13, 2005 and Order No. 2006-552, September 27, 2006, PNY Q4 2005 Earnings Call, December 19, 2005)</i>	YES - <i>See</i> discussion of Revenue Stabilization Adjustment Mechanism	Residential summer \$8/mo, winter \$10/mo; Small General Sales Service \$22/mo; Medium General Sales Service \$75/mo; Large Volume Service \$250/mo.	Residential is a flat volumetric charge. Other service classes have flat per unit rate or the "value" service option which is a declining block rate structure. All volumetric charges are seasonal.	Gas Cost Hedging program recovers costs over defined benchmark and returns to customers as savings under the defined benchmark (<i>see</i> pg 46, 2006 10-K)

Sources: Each utility's rate tariff plus rate case documents and other sources specifically noted.

Declining Use Per Customer Mitigation for Proxy Group Companies

COMPANY - JURISDICTION	REVENUE STABILIZATION ADJUSTMENT MECHANISM	WEATHER NORMALIZATION ADJUSTMENT	CUSTOMER CHARGE	VOLUMETRIC RATE STRUCTURE	OTHER SIGNIFICANT ADJUSTMENTS
PIEDMONT - TN	NO	YES	Residential summer \$10/mo, winter \$13/mo; Small General Sales Service \$29/mo; Medium General Sales Service \$75/mo; Large Volume Service \$300/mo.	Residential is a flat volumetric charge. Other service classes have flat per unit rate or the "value" service option which is a declining block rate structure. All volumetric charges are seasonal.	Purchased Gas Adjustment Rider – Service Schedule No. 311
SOUTH JERSEY GAS	The Company's Conservation Incentive Program ("CIP") is utilized to adjust the Company's revenues in cases wherein Actual Usage per Customer experienced during an Annual Period varies from the Baseline Usage per Customer ("BUC"). This adjustment is applied as a credit or surcharge to customers' bills. The credit or surcharge will also be adjusted to reflect prior year under recoveries or over recoveries pursuant to this CIP. The BUC is reset each time new base rates are placed into effect as the result of a base rate case proceeding.	YES	Residential \$7.76/mo; General \$18.73/mo; Large Volume \$107/mo	Flat rate	Basic Gas Supply Service Clause – Rider A (BGSSC) Remediation Adjustment Clause ("RAC") is intended to recover remediation and/or litigation costs/expenses resulting from the operation or decommissioning of gas manufacturing facilities.

Sources: Each utility's rate tariff plus rate case documents and other sources specifically noted.

Declining Use Per Customer Mitigation for Proxy Group Companies

COMPANY - JURISDICTION	REVENUE STABILIZATION ADJUSTMENT MECHANISM	WEATHER NORMALIZATION ADJUSTMENT	CUSTOMER CHARGE	VOLUMETRIC RATE STRUCTURE	OTHER SIGNIFICANT ADJUSTMENTS
WGL HOLDINGS – DC	NO	YES	Residential \$7.95/mo; Firm Service Other Than Residential \$13.15/mo (< 3,075 therms), \$26.40/mo (> 3,075 therms)	Flat rate	Purchased Gas Charge
WGL HOLDINGS – MD	YES – Firm Credit Adjustment (FCA) – credit to firm customers of revenue from interruptible customers; Revenue Normalization Adjustment (RNA) – recover/credit deviations from test-year non-gas revenue approved in rate case, test-year non-gas revenue adjusted to reflect changes in the number of customers.	YES	Residential \$10.20/mo; Firm Commercial and Industrial Sales Service \$21.10 (< 3,000 therms), \$36.25 (> 3,000 therms)	Declining block rate structure	Purchased Gas Charge
WGL HOLDINGS – VA	Risk Sharing Mechanism (RSM) – credit to firm customers of revenue from interruptible customers.	YES	Residential \$9.00/mo; Commercial and Industrial Service \$16.35/mo	Declining block rate structure	Purchased Gas Charge

Sources: Each utility's rate tariff plus rate case documents and other sources specifically noted.

Decoupled Rate Programs, ROE Provisions

14	Atmos- MS	no	92-UN-0230	10/1/1992					Ordered in 1992, this rate stabilization mechanism has an earnings-based Automatic ROE Adjustment Mechanism that provides rate stabilization and virtually ensures that Atmos will recover authorized revenue within established parameters.
	MD								
15	Baltimore Gas & Electric	no	9036	12/21/2005	11	11.9	48.4 Equity 5.9 P.S. 45.7 LTD		Based on the reasons provided by Staff and the Company, the Commission declined to order a specific adjustment related to Rider 8.
16	Delmarva Power and Light	yes	9093	7/19/2007	10	10.75	48.63		Commission believes that the Bill Stabilization Adjustment will result in improved cost recovery by Delmarva and therefore reduced the Company's ROE by 50 basis points.
17	Potomac Electric Company	yes	9092	7/19/2007	10	10.75	47.69		Order No. 81517 In recognition of the reduced risks that PEPCo would face, the Commission lowered the company's otherwise allowed ROE by 50 basis points.
18	WGL	no	9104	11/16/2007	10	11	53.02		Commission rejected ROE adjustments proposed by various witnesses and stated that it believes that adjustments were reflected through the companies included in the proxy group.
	MO								
19	Atmos Energy	no	GR-2006-0387	2/22/2007		12			Commission discussed decreased risk associated with the elimination of weather variability and derminded that no change was necessary because the risk was already reflected in the comparable group analysis. ROE was not updated in this case.
	NJ								2006 Settlement with both utilities stated that the costs of the efficiency program (Conservation Incentive Program (CIP)) will be funded by shareholders. The CIP tariffs include ROE limitations on recoveries from customers for both weather and non-weather related components.
20	NJ Natural Gas (New Jersey Resources)	no	GR05121020	12/12/2006					No adjustment to the overall ROE was made due to the implementation of the CIP. Under the CIP, the Company will not be allowed to recover any portion of a deficiency that will cause the Company to earn in excess of a 10.5% return on common equity for the annual period.
21	South Jersey Gas	no	GR05121019	12/12/2006					No adjustment to the overall ROE was made due to the implementation of the CIP. South Jersey Gas will not make recoveries pursuant to the CIP, if and to the extent that such recoveries would allow South Jersey to exceed an earned ROE in excess of 10.0%.
	NY								
22	Consolidated Edison	no	06-G-1332	9/25/2007	9.7	11.6	48		No specific adjustment to the ROE was made based on the RDM, but the Commission has stated that an adjustment would be considered along with other other factors on an individual rate case basis.
23	National Fuel Gas Dist.	yes	07-G-0141	12/21/2007	9.1	11.65	44.35		In its decision, the Commission stated that they would apply a 10 basis point reduction to NFG's cost of equity given that the revenue decoupling mechanism may reduce NFG's earnings volatility.
	OH								
24	Vectren Ohio	no	05-1444-GA-UNC	9/13/2006					No mention of ROE in the stipulation approving the Sales Reconciliation Rider.

Decoupled Rate Programs, ROE Provisions

25	Duke Energy ohio	no	07-0589-GA-AIR	5/28/2008	10.5	11	55.76	Levelized Rate Design implemented rather than strict decoupling (this is a constant charge per customer per month). No Specific ROE adjustment is mentioned or considered.
	OR							
26	Cascade Natural Gas	no	06-191	4/19/2006				Upon the adoption of the conservation alliance plan, no change in ROE was initiated.
27	NW Natural Gas	no	03-507	8/22/2003	10.2	11.3	49.5	Order approved WARM - a weather-normalized concept and did not change ROE based on the implementation of this program.
	NC							
28	Piedmont Natural Gas	no						The Company and presiding parties agreed upon a specific rate of return, but did not state a specific ROE in its Stipulation Agreement. The Commission approved the Stipulation Agreement, which included the customer utilization tracker, but did not make a determination with respect to Piedmont's authorized rate of return on common equity. The Commission believes that in a period of declining per-customer usage, a mechanism that decouples recovery of margin from usage, without requiring the utility to file frequent rate cases or increase unpopular fixed charges, clearly reduces shareholder risk.
	SC							
29	Piedmont Natural Gas	no	2005-125-G	9/26/2006	11.2	n/a	n/a	Commission approved the Settlement Agreement, which established an 11.2% ROE.
	UT							
30	Questar Gas	no	07-057-13	6/27/2008	10	11.25	51.38	Commission believes that the decoupling mechanism in that state does affect the Company's operations through a reduction of its business risk, but does not quantify the reduction.
	WA							
31	Avista	no	UG-060518	2/1/2007	9.11			Settlement and Order approving the decoupling pilot program did not discuss change to ROE.
32	Cascade Natural Gas	no	UG-060256	1/12/2007	n/a	11.15	n/a	Settlement stipulated an agreement to the revenue requirement, but was unable to come to an agreement on each of the components of the cost of capital.
	MA							
33	State Docket	no	D.P.U. 07-50-A					ROE will be considered separately for each utility in standard rate proceeding; no uniform adjustment to ROE was determined.

Moody's Bond Index Credit Spread Analysis

	Moody's Baa Index	Moody's A Index	Moody's Aa Index	Credit Level Differentials			
				Baa - A	A - AA	Baa - AA	
5/16/2008	6.78	6.27	6.09	0.51	0.18	0.69	
5/19/2008	6.78	6.25	6.09	0.53	0.16	0.69	
5/20/2008	6.74	6.22	6.03	0.52	0.19	0.71	
5/21/2008	6.76	6.24	6.05	0.52	0.19	0.71	
5/22/2008	6.85	6.29	6.12	0.56	0.17	0.73	
5/23/2008	6.78	6.22	6.05	0.56	0.17	0.73	
5/27/2008	6.88	6.32	6.15	0.56	0.17	0.73	
5/28/2008	6.93	6.37	6.2	0.56	0.17	0.73	
5/29/2008	6.99	6.42	6.26	0.57	0.16	0.73	
5/30/2008	6.93	6.36	6.18	0.57	0.18	0.75	
6/2/2008	6.9	6.34	6.15	0.56	0.19	0.75	
6/3/2008	6.82	6.27	6.09	0.55	0.18	0.73	
6/4/2008	6.89	6.34	6.15	0.55	0.19	0.74	
6/5/2008	6.94	6.38	6.2	0.56	0.18	0.74	
6/6/2008	6.85	6.29	6.12	0.56	0.17	0.73	
6/9/2008	6.82	6.26	6.1	0.56	0.16	0.72	
6/10/2008	6.9	6.35	6.19	0.55	0.16	0.71	
6/11/2008	6.92	6.37	6.22	0.55	0.15	0.7	
6/12/2008	6.98	6.44	6.27	0.54	0.17	0.71	
6/13/2008	7.03	6.48	6.3	0.55	0.18	0.73	
6/16/2008	7.02	6.47	6.29	0.55	0.18	0.73	
6/17/2008	7.02	6.48	6.29	0.54	0.19	0.73	
6/18/2008	6.96	6.42	6.23	0.54	0.19	0.73	
6/19/2008	6.99	6.44	6.25	0.55	0.19	0.74	
6/20/2008	6.95	6.4	6.21	0.55	0.19	0.74	
6/23/2008	6.96	6.41	6.22	0.55	0.19	0.74	
6/24/2008	6.92	6.38	6.17	0.54	0.21	0.75	
6/25/2008	6.92	6.39	6.16	0.53	0.23	0.76	
6/26/2008	6.92	6.38	6.17	0.54	0.21	0.75	
6/27/2008	6.86	6.31	6.1	0.55	0.21	0.76	
Source: Bloomberg				Average Differential	0.55	0.18	0.73

Moody's Long-Term Rating Definitions:

Aaa

Obligations rated Aaa are judged to be of the highest quality, with minimal credit risk.

Aa

Obligations rated Aa are judged to be of high quality and are subject to very low credit risk.

A

Obligations rated A are considered upper-medium grade and are subject to low credit risk.

Baa

Obligations rated Baa are subject to moderate credit risk. They are considered medium-grade and as such may possess certain speculative characteristics.

Ba

Obligations rated Ba are judged to have speculative elements and are subject to substantial credit risk.

B

Obligations rated B are considered speculative and are subject to high credit risk.

Caa

Obligations rated Caa are judged to be of poor standing and are subject to very high credit risk.

Ca

Obligations rated Ca are highly speculative and are likely in, or very near, default, with some prospect of recovery of principal and interest.

C

Obligations rated C are the lowest rated class of bonds and are typically in default, with little prospect for recovery of principal or interest.

Note: Moody's appends numerical modifiers 1, 2, and 3 to each generic rating classification from Aa through Caa. The modifier 1 indicates that the obligation ranks in the higher end of its generic rating category; the modifier 2 indicates a mid-range ranking; and the modifier 3 indicates a ranking in the lower end of that generic rating category.

Source:

<http://www.moodys.com/moodys/cust/AboutMoody/AboutMoody.aspx?topic=rdef&subtopic=moodys%20credit%20ratings&title=Long+Term+Obligation+Ratings.htm>