BEFORE THE NEW YORK STATE PUBLIC SERVICE COMMISSION

In the Matter of:

	)	
APPLICATION OF CENTRAL HUDSON	)	**CASE NOS. 09-E-0588**
GAS & ELECTRIC CORPORATION	)	**and 09-G-0589**
FOR AN INCREASE IN ELECTRIC AND	)	
GAS RATES	)	

REBUTTAL TESTIMONY

OF

ROBERT G. ROSENBERG

December 2009

INDEX

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CASES 09-E-0588 & 09-G-0589

I. INTRODUCTION

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

A. My name is Robert G. Rosenberg. My business address is 541 Bear Ladder Road, West Fulton, New York. I am an economist and financial analyst. My qualifications are described in Appendix A to this testimony.

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of this testimony is to present rebuttal to the direct testimonies concerning the required return on equity for Central Hudson Gas & Electric Corporation (hereinafter referred to as CHGE, or the Company) submitted by the Staff Rate of Return Panel (consisting of Audrey L. Capers and Paul Del Vecchio) and CPB witness Tariq N. Niazi.

Q. Please provide an overview as to how your testimony will be organized?

A. First, I provide a review of the Staff and CPB analyses. I then examine common equity ratios and allowed returns on equity, countering some of the Staff's contentions about these metrics. Next, I examine the base cost of equity determination and (1) modify the Staff proxy group, (2) correct errors in the Staff and CPB DCF analyses and (3) modify the CAPM calculations, including different weightings for the zero-beta CAPM approach and an alternative estimate of the required market risk premium. Finally, I comment on two adjustments that Staff made to the base proxy group cost of equity determination—the Credit Quality Adjustment and the Stayout Premium—and suggest revisions.

Q. Have you prepared an exhibit in conjunction with your testimony?

A. Yes. In support of my testimony, I have prepared Exhibit___(RGR-1), consisting of Schedules 1-6.

Q. Were these schedules prepared by you or under your supervision?

A. Yes, they were.

Q. Briefly describe the testimony of the Staff Rate of Return Panel.

A. The Panel performs two cost of equity calculations—DCF and CAPM—on a group of thirty electric utilities and derives a proxy group cost of equity of 9.91 percent. The Panel's first calculation was a two-stage DCF analysis that produced a 9.94 percent cost of equity estimate. Their second calculation was a CAPM analysis that produced a cost of equity estimate of 9.85 percent. They weighted these results 2/3 DCF and 1/3 CAPM to produce a cost of equity estimate for their proxy group of 9.91 percent. The Staff then lowers this figure by 30 basis points to reflect the difference in bond ratings between their proxy group and CHGE. This produces a 9.61 percent figure, which serves as the basis for the 9.60 percent (rounded) recommendation for a 1-year determination. The Panel also calculates a 12 basis point Stayout Premium to be used if a 3-year rate plan agreement were to be reached. Under these circumstances, Staff's recommendation would be for a 9.72 percent cost of equity allowance (9.60 + 0.12 = 9.72).

Q. Please briefly describe the testimony of Mr. Niazi.

A. Mr. Niazi performs two cost of equity calculations—DCF and CAPM—on a group of 33 electric utilities and derives a 9.79 percent cost of equity estimate for that group. Using a two-stage DCF analysis, Mr. Niazi calculated a cost of equity estimate for his group of

9.76 percent. Using the CAPM approach, Mr. Niazi calculates an average cost of equity estimate for the proxy group of 9.86 percent. Weighting the DCF result 2/3 and the CAPM result 1/3, Mr. Niazi reaches a 9.79 percent cost of equity estimate for his proxy group. After applying a Credit Quality Adjustment of 46 basis points to his DCF estimate, his recommended return for CHGE is 9.49 percent, or 9.50 percent, rounded.

Because the cost of equity methodologies of the Staff and Mr. Niazi are nearly identical, to avoid redundancy I will generally comment on the testimony of the Staff. The comments I make concerning the Staff testimony can, thus, also be viewed as replies to the testimony of Mr. Niazi.

II. EXAMINATION OF COMMON EQUITY RATIOS AND ALLOWED RETURNS ON EQUITY

Q. Did the Staff Panel examine common equity ratios of its proxy group in its testimony?

A. Yes, it did. On Exhibit___(RRP-8) Staff showed a common equity ratio as of June 2009, taken from an SNL Energy publication. Staff indicated, at pages 9 and 44 of its testimony, that the 45.3 percent average common equity ratio of the proxy group provided less of an equity cushion than the 48 percent equity ratio of CHGE. Given that nearly all of Staff's DCF analysis is based on **Value Line projections** and that the rate year ends June 30, 2011, it is important to examine a prospective comparison of the equity ratio levels of CHGE and the proxy group using Value Line data.

Both Staff and CHGE recommend a 48 percent common equity ratio for the Company in this proceeding. On Exhibit___(RGR-1), Schedule 1, I show the common equity ratio for the proxy group companies for the years 2009, 2010 and 2012-2014. As can be seen on Schedule 1, the average common equity ratio for the proxy group is 48.6 percent in the first two of the years, increasing up to 50.0 percent in the 2012-2014 period. These data indicate that CHGE is projected to have about the same, or a slightly lower, common equity ratio than the proxy group in the near future. While I am not recommending any type of adjustment on the basis of this comparison, I do recommend that the Commission take this comparison into account in examining the risk position of CHGE versus the proxy group.

Q. Did Staff present a tabulation of recent allowed returns on equity?

A. Yes. On Exhibit___(RRP-17), Document 12, Staff presented a compilation of allowed

returns in 2009 to date. The Panel suggested, at page 47, line 16, that its 9.60 percent recommended return in this proceeding fell within the range of these recent allowed returns. On Exhibit___(RGR-1), Schedule 2, I present a compilation of the allowed returns, and common equity ratios, for utility operating company subsidiaries of the companies in Staff's proxy group, with the data taken from Staff's exhibit. As shown on Schedule 2, the average allowed return for these companies is 10.67 percent. With one exception, all of these companies had an allowed return on equity of 10.5 percent or higher. I also note that the average allowed common equity ratio for these companies was about 49 percent. Thus, Staff's 9.60 percent cost of equity recommendation for CHGE is **not** within the range of the allowed returns of the companies shown on Schedule 2.

III. MODIFICATION OF THE STAFF PROXY GROUP

Q. How many proxy companies did Staff employ in its cost of equity analysis?

A. The Panel employed a proxy group of 30 companies.

Q. Would you comment on Staff's proxy group?

A. Staff's proxy group of 30 companies is more than half of the 54 electric utility companies in the Value Line universe. The average bond rating of this proxy group is quite different from that of CHGE, causing Staff to apply a large Credit Quality Adjustment. Shrinking Staff's sample would lead to two consequences—it would make the proxy group more risk comparable to CHGE and it would lessen the magnitude of any needed Credit Quality Adjustment. Staff, itself, indicated in an initial brief in a NYSEG proceeding, Case 05-E-1222, at page 206, that:

> Staff's group is also superior to the Company's in one other respect. It simplifies the cost of equity analysis because no adjustment is required to the group's return since NYSEG's credit rating of Baa1/BBB+ matches the average for the proxy group....

Thus, substantially shrinking the needed Credit Quality Adjustment would, in the spirit of Staff's comment, provide a superior result.

Q. How have you modified the Staff proxy group to make the group more risk comparable to CHGE and lessen the need for a Credit Quality Adjustment?

A. Yes, I have. I started with Staff's proxy group but only employed companies that were rated BBB+ and higher by S&P and Baa1 and higher by Moody's. This modified proxy group is shown on Exhibit___(RGR-1), Schedule 3. As can be seen on Schedule 3, the proxy group, on average, has a bond rating of about A3 / A-. CHGE has a bond rating of

A3 / A, thus, rendering the need for a Credit Quality Adjustment nearly moot.

As shown on Schedule 3, the DCF and CAPM cost of equity estimates for the modified proxy group are 10.52 percent and 9.49 percent, respectively, with the weighted average cost of equity for the group at 10.18 percent.

If a Credit Quality Adjustment is to be applied, I have calculated that that adjustment would be only 9 basis points, following the method shown on the Staff Panel Exhibit___(RRP-7). Subtracting the 9 basis point adjustment from the 10.18 percent cost of equity estimate for the proxy group produces an adjusted cost of equity estimate for CHGE of 10.09 percent, or 10.1 percent, rounded.

Q. Should there be any concern that there are 12 companies in your modified proxy group?

A. No, there should not be. In the Consensus Document in the Generic Financing proceeding, Case 91-M-0509, the only discussion of the required minimum sample size was in the context of gas proxy companies, where a minimum of ten companies was specified. Over the years, Staff has often used a sample proxy group size smaller than the 12-company group that I show on Schedule 3. In fact, in a non-exhaustive search, I found at least nine instances where the Staff has used a proxy group smaller than twelve companies, including two instances where Ms. Capers was the witness (Case Nos. 05-E-0934, 05-G-0935 and Case No. 02-G-1533). Thus, use of the modified proxy group that I show on Schedule 3: (1) uses an analysis based on a proxy group closer in risk to that of CHGE; (2) calls for a much smaller Credit Quality Adjustment, if any; (3) comports with the discussion in the Consensus Document in the Generic Financing proceeding; and (4) employs a proxy group size larger than that employed in many instances in Staff's own

analyses.

IV. CORRECTIONS TO THE DCF ANALYSIS

Q. Did the Staff have calculational errors in its DCF analysis?

A. Yes, it had two errors, one of which produced an understatement in the DCF result of 25 basis points.

Q. What was the first calculational error made by Staff?

A. The first calculational error pertains to Duke Energy Corporation. Both the near-term dividend stream and the long-run dividend stream had an incorrect formula on the Staff's spreadsheet, incorrectly growing the dividends by a bond yield and then a zero percent figure. This is an obvious error in the calculation of the DCF cost of equity for Duke. While correcting this error would raise the average somewhat, since both before and after the correction Duke remains below the median, the correction does not affect the recommended DCF figure.

Q. What was the second calculational error in Staff's DCF analysis?

A. Staff understated the near-term dividend stream for the entire proxy group, which affects all subsequent dividends since those dividends are based on growth from the near-term period onward.[1] Staff employed the correct 2010 dividend as the first dividend in the dividend stream for its internal rate of return (i.e., Long-Form ROE) calculation.

[1]Mr. Niazi also understated the near-term dividend stream, but in a different way than did Staff. Mr. Niazi used a DCF pricing period ending October 2009. As the first dividend in his dividend stream, Mr. Niazi employed the average of the 2009 and 2010 estimated dividends from Value Line. However, the Generic Financing method is to use a more forward-looking dividend (in this instance, the 2010 dividend, alone) to start the dividend stream. Staff noted on page 22 of its June 25, 1993 reply comments in the Generic Financing proceeding that: "The proposed DCF methodology uses a six month average price (i.e., April to September, or October to March) and then uses a dividend for the twelve month period beginning three months after the pricing period to establish the flow of expected dividends (i.e., the annual dividend starting in January or June)." (As I note above, in this CHGE proceeding Staff, properly, used a 2010 projected dividend to start its analysis.) Thus, Mr. Niazi's backward-looking

However, for the 2011 dividend, Staff made an error. Instead of taking the 2010 dividend and growing it by the dividend growth rate shown in Column (N) of Staff Exhibit___(RRP-6), Staff, mistakenly and without explanation, only employs one-half the dividend growth rate for that year.[2] This understates the 2011 dividend. It also understates all dividends from 2012 onward, since those dividends are grown from the 2011 dividend.

Q. Have you performed a DCF calculation correcting Staff's two errors?

A. Yes, I have. On Exhibit___(RGR-1), Schedule 4, I show the results of (1) correcting the formula errors in the Duke Energy calculation and (2) correcting the error in the 2011 dividend and all subsequent dividends for the proxy group that was described above. The median of the corrected DCF calculations for the proxy group is 10.19 percent—25 basis points higher than the 9.94 percent figure that Staff derived. Giving this corrected figure 2/3 weight and the CAPM result of 9.85 percent 1/3 weight, the revised proxy group cost of equity is 10.07 percent, or 10.1 percent, rounded.

approach understates the expected dividend stream.

[2] I have examined the DCF calculations in the Staff testimony in the Consolidated Edison Company of New York, Inc. proceeding, Case 09-E-0428, filed in August 2009, and have determined that Staff did **not** grow the second year's projected dividend by only one-half the projected dividend growth rate as they do in this proceeding. Instead, Staff (correctly) grew the second and subsequent near-term dividends by the **full** projected dividend growth rate. Below, I will show the impact on Staff's DCF analysis in this proceeding of correcting Staff's error by employing full, not half, of the projected dividend growth to the near-term dividend stream.

V. REBUTTAL TO THE CAPM APPROACH

Q. Are there any alternative ways of calculating the CAPM approach that the Commission should consider?

A. Yes, I have two suggestions in this regard—one dealing with the weighting of the zero-beta CAPM approach and the second pertaining to the estimate of the expected market risk premium.

Q. Would you discuss an alternate weighting for the zero-beta CAPM approach?

A. In the zero-beta CAPM approach, the Staff Panel employed a 75/25 weighting of utility-specific and market-in-general risk premium factors, respectively. However, in certain instances, including a prior Central Hudson proceeding where Ms. Capers was the witness, Staff has employed a 50/50 weighting for the zero-beta CAPM approach. In testimony in the Nine Mile Point 2 sale proceeding (Case No. 01-E-0011), filed in April 2001, a Staff Policy Panel indicated at page 36 that it chose to use a 50/50 weighting rather than a 75/25 weighting because it will "tend to produce less volatile results." In a prior CHGE proceeding, Case Nos. 05-E-0934 and 05-G-0935, Staff employed a 50/50 weighting for the zero-beta CAPM, noting that this was within the range of previously-accepted weightings. Use of the 50/50 weighting in this proceeding results in a zero-beta CAPM estimate of 10.75 percent for the proxy group—60 basis points above the results that Staff showed in its testimony using a 75/25 weighting.

Q. Are there reasons that the Commission may want to consider an alternative or complementary estimate of the market risk premium in the CAPM analysis?

A. Yes, there are. The Commission indicated in its April 24, 2009 Order concerning

Consolidated Edison Company of New York, Inc., Case Nos. 08-E-0539 and 08-M-0618, at page 133, that:

> ...while we prefer a forward-looking market risk premium, the volatility of using just one, as DPS Staff does, raises concerns which should be addressed in future rate cases.

While Staff relies solely on a projected market return from Merrill Lynch in deriving the expected market risk premium, Merrill Lynch's projection only reflects the opinion of one firm, and does not reflect the diversity of opinion that may exist in the financial marketplace. In addition, the Merrill Lynch publication relied upon by Staff is not publicly available.[3] The Commission in its Order concerning Orange and Rockland Utilities, Inc., in Case No. 06-E-1433 and 06-E-1547 stated at page 14 in reference to the DCF method that:

> ...the method offers the significant benefit of reliance on **readily available**, objective data to measure an indicator of real importance to investors. [Emphasis added.]

A Recommended Decision (RD) was issued in the GFC. Staff Witness Henry, at page 21 of his testimony in the Consolidated Edison proceeding, Case 06-G-1332, indicated that:

> While the GFC RD utilized historic risk premium data from *Ibbotson Associates*, it noted that its acceptance of the Ibbotson data would not preclude the use of a current assessment of the market's required return **provided that information was widely available to investors**. [Emphasis added.]

The Merrill Lynch data, being only available to Merrill Lynch clients, does not meet the

[3] I have called Merrill Lynch offices in New York City and Albany and requested a copy of the source employed by Staff to estimate the expected return on the market. In both instances, I was told that this publication is not publicly available, but was, instead, available only to Merrill Lynch clients.

GFC RD "widely available" criterion.[4] That being the case, Merrill Lynch projections cannot be thought of having a wide influence on the return expectations of the investing public, in general.

As an alternative/complement for the estimate of the market risk premium, I have calculated a two-stage DCF cost of equity estimate for the Value Line Industrial Composite on Schedule 5. Such an approach is reasonable because: (1) it addresses the Commission's concern about relying on only one estimate by complementing the Merrill Lynch estimate with a Value Line-based estimate; (2) it employs the same source (Value Line, which is widely, publicly available) as used by the Staff in deriving its proxy group DCF analysis and beta; (3) it employs the Commission-preferred two-stage DCF calculation to estimate the market risk premium; and (4) while Merrill Lynch provides a generalized description of how it derives the market required return, its estimate is more like a black box in that it does not provide details—in contrast, the Value Line Composite two-stage DCF calculation offers transparency, with all inputs and calculations publicly available and verifiable.

Q. What were the results of conducting a two-stage DCF analysis on the Value Line Composite?

A. On Exhibit___(RGR-1), Schedule 5, I show the two-stage DCF calculation for the composite. This calculation exactly follows the Staff methodology used to calculate the DCF cost of equity for the Staff proxy group. As shown on Schedule 5, the required

[4] Tellingly, a few years ago, Staff suggested that its lack of access to Ibbotson data was the reason it used other estimates of the market risk premium rather than the Ibbotson approach specified in the GFC.

return for the Value Line Composite is 15.2 percent. Averaging this estimate with the 11.95 percent Merrill Lynch estimate produces an average estimate of the market required turn of 13.58 percent. Subtracting the 3.92 percent Staff risk-free rate estimate from this 13.58 percent market return estimate produces a market risk premium of 9.66 percent (13.58 – 3.92 = 9.66). Employing a market risk premium of 9.66 percent, the proxy group beta of 0.70 and the Staff estimate of the risk-free rate of 3.92 percent, the traditional CAPM calculation for the proxy group produces a 10.68 percent result, while the zero-beta CAPM calculation produces an 11.41 percent figure. The average of these two CAPM results is 11.04 percent—well above the Staff 9.85 percent calculated using the Merrill Lynch estimate, alone.

VI. ANALYSIS OF THE STAFF CREDIT QUALITY ADJUSTMENT

Q. Are there any factors that the Commission should consider in determining the propriety of, or magnitude of, the Staff Credit Quality Adjustment?

A. Yes, there are. Moody's downgraded CHGE from A2 to A3 in September 2009. Moody's also assigned the Company a Negative outlook. Out of the 30 companies in Staff's proxy group, as shown on Exhibit___(RRP-8), 25 are assigned a Stable outlook, three have a Negative outlook and one has a Positive outlook.[5] Thus, at least as far as Moody's is concerned, CHGE is certainly more on the cusp of a possible downgrade than the proxy group as a whole. There are several reasons why the Commission may want to consider tempering the Credit Quality Adjustment for CHGE at this point in time.

Q. Can you elaborate on those reasons?

A. First, the Financial Integrity Portion of the GFC established an A bond rating as an appropriate target for utilities in New York. Second, Chairman Gary Brown of the PSC stated in a June 4, 2009 presentation concerning Wall Street that:

> The public interest and investor interests are aligned on access to capital at reasonable terms. The NY Commission has consistently taken the position that a bond rating in the A category tended to provide a relatively low cost of capital for ratepayers to support while also making it possible for utilities to access the financial markets even in very difficult times. ...events since September 2008 have really highlighted the benefits of an A rating when economic conditions are difficult. While BBB utilities accessed the market the premium they paid over A rated utilities was startling.

[5] S&P assigns CHGE a Stable Credit Watch designation; of the 30 companies in Staff's proxy group, S&P has 24 as Stable, 3 as Negative and 3 as Positive.

Third, as Chairman Brown noted, the spread in bond yields between A-rated and lower-rated utilities has widened recently. While the spread has subsided somewhat in the past few months, it is still higher than it has been over the course of the past several years. Thus, the cost to customers and CHGE of losing an A bond rating is higher today than formerly.

Given all the factors discussed above, I recommend that the Commission consider tempering the application of a mechanical Credit Quality Adjustment.

VII. REVIEW OF THE STAFF STAYOUT PREMIUM

Q. Did Staff propose a stayout premium if a 3-year rate plan were to be adopted in this proceeding?

A. Yes, on pages 71-72, Staff proposed a stayout premium of 12 basis points. The Panel derives this figure by taking one-half of the five-year average spread between the yield on 3- and 1-year Treasury securities. While a stayout premium is generally negotiated between the parties of a settlement agreement, I believe it is worthwhile for the parties and the Commission to see the character of the data examined by Staff in deriving its proposed stayout premium.

Before examining the data specifically, it is important to make an observation. In the last case where CHGE was awarded a stayout premium, in Case Nos. 05-E-0934 and 05-G-0935 in 2006, the Company was accorded a 38 basis point stayout premium. That 38 basis point stayout premium is more than three times the level of what Staff is proposing in this proceeding. Furthermore, the economic climate is much more unsettled currently than it was in 2006. This comparison should give pause about the adequacy of a 12 basis point stayout premium under current circumstances.

As indicated on Exhibit___(RRP-11), Staff used 5-year average Treasury yield spreads ending September 2009 to calculate the stayout premium. On Schedule 6, Page 1, I show five years of monthly data, ending September 2009, for yields on 1- and 3-year Treasury securities, along with the difference between the two. The 5-year average spread is 24 basis points. Staff is suggesting taking half of this difference—i.e., 12 basis

points—as the stayout premium. On page 2 of Schedule 6 I have sorted the spread data that appear on Page 1. Twenty-four out of the sixty months examined during this period have a **negative** spread between 3- and 1-year Treasuries.[6] This represents fully 40 percent of the data and cannot be regarded as a normal circumstance. At the other extreme, there are four figures over 100 basis points—all within the last four months.

Another way of examining the unusual nature of the data on Page 1 of Schedule 6 is to examine the coefficient of variation. The coefficient of variation is merely the standard deviation divided by the average of a series of data. The coefficient of variation helps to provide an idea of exactly how variable the data truly are. For example, observe the comparison of the two hypothetical data series below:

Data Series	Standard Deviation	Average	Coefficient of Variation
A	10	100	10/100 = 0.10
B	10	2	10/2 = 5.00

Series A does not have much variation in relationship to the average; its coefficient of variation is only 0.10. In sharp contrast, Series B has extensive variation, with the standard deviation being five times the mean. Any data with a coefficient of variation greater than 1.0 is obviously quite variable. The 5-year spread data shown on Page 1 of Schedule 6 has a standard deviation of 0.43, an average of 0.24 and a coefficient of variation of 1.79. This demonstrates that the spread data utilized in the Staff calculation has unusually large variation.

[6] For the 60 months ending March 2006, around the time of CHGE's last rate case that employed a 38 basis point

A third way of demonstrating the unusual nature of the spread data examined by Staff is to examine such data over a longer timeframe. Page 3 of Schedule 6 shows the spread between 3-year and 1-year Treasury securities on an annual basis from 1985 through 2009. (The average for 2009 only reflects data for the period January through September.) Note that the annual averages for 2006 and 2007 are negative, which is an unusual situation given all the other years are a positive spread as shown on Page 3 of Schedule 6. The data in this period are skewing the average that the Staff uses downward. As shown in the top bank of averages (ending 2009) on Page 3 of Schedule 6, the 5-year average of 26 basis points is roughly half of the other averages as one goes further back in time. The medians show a somewhat similar pattern. To show how unusual this 5-year period is, I included the 5-year averages ending in 1989, 1994, 1999, 2004 and 2009 at the bottom of Page 3 of Schedule 6. It is clear that the recent 5-year period has produced an average spread well below the other 5-year periods. Given that the risk to any given company and the economy as a whole currently is likely higher than in recent times, using the recent abnormal 5-year history as a proxy of the **future** required stayout would not provide CHGE adequate compensation for stayout risk. The Consensus Document in the GFC indicated that the amounts set for stayouts of various periods were approximately equal to the 20-year average of the associated Treasury yield spreads. As shown on Page 3 of Schedule 6, the latest 20-year average spread is 77 basis points. The 77 basis point 20-average spread is nearly three times the magnitude of the 5-year average spread and it would be about six times of half the recent 5-year spread.

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stayout premium, only three of the 60 months exhibited a negative spread.

Thus, unlike during the period of the Consensus Document, we currently have a 5-year spread that is very different from the 20-year average and, using all the data shown on Pages 2 and 3 of Schedule 6, clearly aberrational.

Q. Is there precedent for changing a mechanical calculation when the underlying data seem very unusual and/or volatile?

A. Yes, there is. In a Finance Panel testimony in the Consolidated Edison Company of New York, Inc. proceeding, Case 09-E-0428, in August 2009, the Staff indicated that they changed from using only a 6-month period of analysis to using a 5-year average period of analysis to calculate a Credit Quality Adjustment. The Staff noted, at page 83 of that testimony, that in the prior Consolidated Edison proceeding, it recommended that "the Commission may have to exercise additional judgment" in determining the appropriate level of a Credit Quality Adjustment due to unusual and volatile data. Based on the analysis I have presented above indicating the unusual and volatile nature of the data underlying the Staff stayout premium calculation in this proceeding, I believe that it would be appropriate for the parties and the Commission to "exercise additional judgment" in this matter, also.

Q. Should the current and prospective economic circumstances be considered in establishing an appropriate stayout premium that would adequately compensate CHGE?

A. Yes. The Staff Panel notes at page 65, line 3 of its testimony that:

> At this time, however, the economy is not static; there is a lot of uncertainty in the market.

On page 61, line 14 of its testimony, the Panel, after indicating that **its estimate of the**

market risk premium was increasing, noted that:

> Current market conditions are unique due to the uncertainty in the financial market after the collapse of Lehman Brothers and great disruptions in the banking market and the market for mortgages.

Furthermore, as I show on page 4 of Schedule 6, interest rates are projected to increase by more than 100 basis points over the next several years (through 2013). These data are relevant to any discussion about the stayout premium given that the third year of a 3-year rate plan would end June 30, 2013.

In my opinion, the information presented above provides a basis for adjusting the proposed 12 basis point premium upward.

VIII. SUMMARY

Q. Would you briefly summarize the points that you have raised in this rebuttal?

A. In this rebuttal I have pointed out that: (1) the projected common equity ratio for the proxy group is equal to, or somewhat above, that of CHGE; (2) recent allowed returns on equity of subsidiaries of Staff proxy group companies are higher than the cost of equity Staff is recommending for CHGE in this proceeding; (3) modifying the Staff proxy group to make it more risk comparable to CHGE lowers the size of the needed Credit Quality Adjustment and produces an adjusted cost of equity determination for CHGE of 10.1 percent; (4) correcting errors in Staff's DCF analysis, the proxy group cost of equity increases to 10.1 percent; (5) alternative weighting of zero-beta CAPM components raises the result of that approach by 60 basis points; (6) employing a Value Line-based estimate of the market risk premium in the CAPM to complement the Merrill Lynch estimate produces an 11.04 percent CAPM cost of equity estimate for the proxy group—more than 100 basis points above the estimate calculated by Staff using the Merrill Lynch estimate, alone; (7) analysis of the Credit Quality Adjustment indicated that a tempering of the adjustment may be in order; and (8) examination of the data underlying the calculation of the Staff 12 basis point stayout premium shows the data to be aberrational, suggesting an increase in the stayout premium is needed.

Q. Does this conclude your rebuttal testimony?

A. Yes, it does.

EDUCATION AND EMPLOYMENT BACKGROUND
OF
ROBERT G. ROSENBERG

Education

I have a Bachelor of Arts degree in Political Science, with a minor in Economics, from Hunter College. I received a Master of Business Administration degree with a major in Finance at the New York University Graduate School of Business Administration.

Employment

From 1969 through mid-March 1983, I was employed by the firm of National Economic Research Associates (NERA), reaching the position of Senior Economic Analyst. In March of 1983, I became a principal of Benrose Economic Consultants, Inc., a consulting firm in New York City. In April 2000, I became a principal of Edgewood Consulting, Inc., a firm located in the Capital District area of New York. I am currently conducting business as an independent consultant. Over the years, I have performed economic research and consulting services for companies, law firms, government agencies and trade associations. Throughout this period, I have concentrated on the analysis of regulated industries, including electric and gas utilities, insurance and steamship companies. I have prepared direct and rebuttal testimony related to financial aspects of utility rate proceedings--*e.g.*, cost of common equity, capital structure, etc. Along with these "typical" rate case issues, I have also testified regarding more unusual matters: intra-company royalty payments; the correct procedure to use in calculating the cost of debt; whether a cogeneration project met Qualifying Facility ownership standards; and responsibility

for stranded costs.

I have had numerous assignments involving evaluation, consultation and/or internal reports to clients. Examples of this include: (1) analyzing issues relating to industry restructuring (*e.g.*, implications of Commission-ordered divestiture, the risks associated with the institution of incentive plans, unbundling electric rates, etc.); (2) consulting with a utility company concerning the financial and regulatory aspects of a potential merger and the possible regulatory treatment of an acquisition premium; (3) evaluating the feasibility of instituting an administrative securitization proposal; (4) determining incremental risks flowing from purchased power contracts; and (5) analyzing studies regarding property values near transmission lines.

Outside the regulatory arena, I have estimated financial damages related to (1) breach of contract and (2) earnings losses as a result of injuries. I have also examined stock prices to see if alleged manipulation was likely and have performed economic valuation for employee stock option plan purposes.

I have presented lectures at the Pace University Center for International Business Studies regarding the regulatory process. A number of articles that I authored have been published in *Public Utilities Fortnightly* (PUF).

Appearances Before Regulatory Agencies

I have presented testimony before the Federal Energy Regulatory Commission and the regulatory agencies in the following states: Arizona, Connecticut, Kentucky, Maine, Massachusetts, Minnesota, Mississippi, New Hampshire, New Jersey, New York,

Pennsylvania, Rhode Island, South Dakota and Vermont. These testimonies were presented on behalf of: Blackstone Valley Electric Company, Boston Edison Company, Central Hudson Gas & Electric Corporation, Central Maine Power Company, Citizens Communications Company, Connecticut Natural Gas Corporation, Consolidated Edison Company, Kentucky Utilities Company, KeySpan Energy Delivery Long Island, KeySpan Energy Delivery New York, Long Island Lighting Company, Louisville Gas and Electric Company, Minnesota Power & Light Company, Mississippi Power Company, New York State Electric & Gas Corporation, Niagara Mohawk Power Corporation, Northern States Power, Orange & Rockland Utilities, Pacific Gas & Electric Company, Pike County Light & Power Company, Public Service Company of New Hampshire, Public Service Company of New Mexico, Rochester Gas & Electric Corporation, Rockland Electric Company and Southern Connecticut Gas Company. In addition, I have testified before: the Society of Maritime Arbitrators concerning the estimation of damages in the matter of Empresa Publica de Abastecimento de Cereais (an agency of the Government of Portugal) vs. Point Endeavor Corporation and Tradigrain, Inc.; U.S. Bankruptcy Court regarding financing for an office building in Chapter 11; and the Federal Maritime Commission regarding the fair return for Matson Navigation Company.

Exhibit___(RGR-1)
Schedule 1

STAFF PROXY GROUP COMMON EQUITY RATIO			
	Common Equity Ratio		
Company	2009	2010	2012-14
ALLETE	55.5	53.5	51.5
Alliant Energy Corp.	60.0	59.0	60.5
Ameren Corp.	51.0	52.0	54.0
American Electric Power	46.5	45.5	48.0
Avista Corp.	50.0	50.5	50.0
Cleco Corp	47.0	48.5	52.5
Consolidated Edison	51.0	50.0	50.5
DPL Inc.	43.5	47.0	47.0
DTE Energy Co.	44.0	44.0	44.5
Duke Energy Corp.	59.5	57.5	52.0
Edison International	44.0	43.5	45.5
Empire District Electric	46.0	46.5	49.0
Entergy Corp.	40.5	41.5	44.0
FirstEnergy Corp.	47.0	47.0	48.5
FPL Group, Inc.	45.5	45.5	45.5
Hawaiian Electric	50.0	52.0	55.0
IDACORP, Inc.	54.0	53.0	51.0
MGE Energy, Inc.	64.0	64.5	65.0
Northeast Utilities	40.0	39.5	44.0
NSTAR	52.5	49.0	54.0
Pacific Gas & Electric Corp	48.5	50.0	54.5
Pinnacle West Capital	48.5	49.5	50.0
Portland General Electric	52.5	47.0	50.5
Progress Energy	45.0	45.5	47.5
Public Service Enterprise Group	49.5	56.0	57.5
Southern Co.	42.5	43.0	42.0
TECO Energy, Inc.	39.5	41.5	41.5
Vectren Corp.	46.5	47.0	50.0
Wisconsin Energy	46.0	42.5	45.5
Xcel Energy, Inc.	47.5	46.5	48.5
Average	48.6	48.6	50.0
Median	47.3	47.0	50.0

Source: The Value Line Investment Survey
August 7, August 28 and
September 25, 2009.

Exhibit___(RGR-1)
Schedule 2

ALLOWED RETURNS FOR SUBSIDIARIES OF STAFF'S PROXY COMPANIES
2009

State	Date of Decision	Subsidiary/Parent	Type of Service	Allowed ROE	Allowed Common Equity Ratio
CA	3/12/2009	Southern Cal Ed (Edison Int'l)	Electric	11.50	48.00
FL	3/17/2009	Tampa Elec (TECO)	Electric	11.25	47.49
ID	1/30/2009	Idaho Pwr (Idacorp)	Electric	10.50	49.27
IN	3/4/2009	Indiana Mich (AEP)	Electric	10.50	45.80
MO	1/27/2009	Union Elec (Ameren)	Electric	10.76	52.01
OH	1/21/2009	Cleveland Elec (FirstEnergy)	Electric	10.50	49.00
OH	1/21/2009	Ohio Edison (FirstEnergy)	Electric	10.50	49.00
OH	1/21/2009	Toledo Edison (FirstEnergy)	Electric	10.50	49.00
OK	1/14/2009	Public Service OK (AEP)	Electric	10.50	44.10
ID	5/29/2009	Idaho Pwr (Idacorp)	Electric	10.50	49.27
LA	4/2/2009	Entergy New Orleans (Entergy)	Electric	11.10	NA
MN	4/3/2009	Minnesota Power (Allete)	Electric	10.74	54.79
NY	4/21/2009	Con Ed Co of NY (Con Ed Inc.)	Electric	10.00	48.00
ID	7/17/2009	Avista Corp (Avista)	Electric	10.50	50.00
OH	7/8/2009	Duke Energy Ohio (Duke Energy)	Electric	10.63	51.59
LA	4/2/2009	Entergy New Orleans (Entergy)	Gas	10.75	NA
Average				10.67	49.09
Median				10.50	49.00

Sources: Staff Exhibit___(RRP-17), Document 12.

Exhibit___(RGR-1)
Schedule 3

STAFF COST OF EQUITY METHOD
Modified Staff Proxy Group
Companies Rated:
BBB+ and Higher by S&P and
Baa1 and Higher by Moody's

Companies	S&P Bond Rating	Weighting	Moody's Bond Rating	Weighting	Beta	DCF Cost of Equity
ALLETE	BBB+	6	Baa1	6	0.70	9.32
Alliant Energy Corp.	BBB+	6	Baa1	6	0.70	10.44
Consolidated Edison Inc.	A-	7	Baa1	6	0.65	9.16
DPL Inc.	A-	7	Baa1	6	0.60	20.26
FPL Group, Inc.	A	8	A2	8	0.75	11.65
MGE Energy, Inc.	AA-	10	Aa3	10	0.65	10.61
NSTAR	A+	9	A2	8	0.65	11.08
PG&E Corp.	BBB+	6	Baa1	6	0.55	11.21
Southern Co.	A	8	A3	7	0.55	10.75
Vectren Corp.	A-	7	Baa1	6	0.75	9.35
Wisconsin Energy	BBB+	6	A3	7	0.65	10.19
Xcel Energy, Inc.	BBB+	6	Baa1	6	0.65	9.80
Average		7.2		6.8	0.65	11.15
Median		7.0		6.0	0.65	10.52

Traditional CAPM ROE	9.14
Zero-Beta CAPM ROE	9.84
Average CAPM ROE	9.49
Cost of Equity: 2/3 DCF, 1/3 CAPM Weighting	10.18

Moody's Bond Rating	S&P Bond Rating	Assigned Weighting
Aaa	AAA	13
Aa1	AA+	12
Aa2	AA	11
Aa3	AA-	10
A1	A+	9
A2	A	8
A3	A-	7
Baa1	BBB+	6
Baa2	BBB	5
Baa3	BBB-	4
Ba1	BB+	3
Ba2	BB	2
Ba3	BB-	1

Exhibit___(RGR-1)
Schedule 4

Central Hudson Gas and Electric Corporation
Cases 09-E-0588 and 09-G-0589
Calculation of Proxy Group Cost of Equity

Value Line:
Issue 1, August 28, 2009 - Electric Industry (East)
Issue 5, September 25, 2009 - Electric Industry (Central)
Issue 11, August 7, 2009 - Electric Industry (West)

(B)		(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)	(T)	(U)	(V)	(W)	(X)
			Avg. Hi/Low								# of	# of	DPS	Retention	Return on		Increase						
			7/09-9/09	EPS	DPS	DPS	DPS	BPS	BPS	BPS	Shares	Shares	Growth	Rate	Equity		in	MBR				Sustainable	Long-Form
Company		Beta	Price	2012-14	2009	2010	2012-14	2009	2010	2012-14	2009	2012-14	2012-14	2013	2013	B x R	Shares	2009	S Factor	V Factor	S x V	Growth	ROE
ALLETE	ALE	0.70	$32.33	2.75	1.76	1.80	1.92	25.65	26.30	28.75	34.50	41.00	2.17	0.30	9.71	2.93	4.41	1.26	5.56	0.21	1.15	4.08	9.37%
Alliant Energy Corp.	LNT	0.70	$26.42	3.20	1.50	1.60	1.92	26.15	26.80	31.05	111.00	116.00	6.27	0.40	10.56	4.22	1.11	1.01	1.12	0.01	0.01	4.23	10.61%
Ameren Corp.	AEE	0.80	$25.72	3.00	1.54	1.54	1.70	33.15	34.00	37.25	238.00	252.00	3.35	0.43	8.18	3.54	1.44	0.78	1.12	-0.29	-0.32	3.22	9.23%
American Electric Power	AEP	0.70	$30.86	3.50	1.64	1.66	1.90	27.40	28.70	33.50	477.00	490.00	4.60	0.46	10.72	4.90	0.67	1.13	0.76	0.11	0.09	4.98	10.31%
Avista Corp.	AVA	0.70	$19.12	1.75	0.78	0.90	1.20	18.95	19.55	21.25	55.00	58.00	10.06	0.31	8.35	2.62	1.34	1.01	1.35	0.01	0.01	2.64	8.33%
Cleco Corp	CNL	0.65	$23.95	2.50	0.90	1.00	1.60	18.35	19.20	21.75	61.00	65.00	16.96	0.36	11.73	4.22	1.60	1.30	2.09	0.23	0.49	4.71	10.36%
Consolidated Edison	ED	0.7	$39.51	3.85	2.36	2.4	2.44	35.9	36.80	40.80	278	285.00	0.83	0.37	9.60	3.52	0.62	1.10	0.69	0.09	0.06	3.58	9.18%
DPL Inc.	DPL	0.60	$24.59	2.70	1.14	1.18	1.30	9.05	9.30	10.10	116.00	124.00	3.28	0.52	27.10	14.05	1.68	2.72	4.57	0.63	2.89	16.94	20.31%
DTE Energy Co.	DTE	0.75	$34.30	4.00	2.12	2.12	2.50	37.20	37.95	41.25	166.00	179.00	5.65	0.38	9.83	3.69	1.90	0.92	1.75	-0.08	-0.15	3.54	10.06%
Duke Energy Corp.	DUK	0.65	$15.28	1.40	0.94	0.98	1.10	16.65	16.85	17.75	1295.00	1310.00	3.93	0.21	7.96	1.70	0.29	0.92	0.26	-0.09	-0.02	1.68	8.48%
Edison International	EIX	0.80	$32.68	4.25	1.25	1.28	1.50	29.95	31.65	38.50	325.81	325.81	5.43	0.65	11.40	7.38	0.00	1.09	0.00	0.08	0.00	7.38	11.09%
Empire District Electric	EDE	0.75	$18.10	1.75	1.28	1.28	1.35	15.80	16.30	17.50	38.00	41.00	1.79	0.23	10.12	2.31	1.92	1.15	2.20	0.13	0.28	2.59	9.52%
Entergy Corp.	ETR	0.70	$78.52	8.00	3.00	3.00	3.60	42.50	46.75	60.50	188.00	188.00	6.27	0.55	13.79	7.59	0.00	1.85	0.00	0.46	0.00	7.59	11.27%
FirstEnergy Corp.	FE	0.80	$43.10	5.25	2.20	2.20	2.65	28.60	29.90	36.75	304.84	304.84	6.40	0.50	14.78	7.32	0.00	1.51	0.00	0.34	0.00	7.32	12.30%
FPL Group, Inc.	FPL	0.75	$56.34	5.50	1.89	2.00	2.30	31.05	33.95	43.25	415.00	432.00	4.77	0.58	13.23	7.70	1.01	1.81	1.83	0.45	0.82	8.52	11.72%
Hawaiian Electric	HE	0.70	$17.76	1.75	1.24	1.24	1.24	15.25	15.45	16.75	91.75	93.50	0.00	0.29	10.59	3.09	0.47	1.16	0.55	0.14	0.08	3.16	9.59%
IDACORP, Inc.	IDA	0.70	$27.69	2.75	1.20	1.20	1.40	29.20	31.00	36.00	48.00	52.00	5.27	0.49	7.83	3.84	2.02	0.95	1.92	-0.05	-0.10	3.74	8.25%
MGE Energy, Inc.	MGEE	0.65	$35.94	2.80	1.45	1.47	1.54	21.85	22.85	21.05	23.20	25.00	1.56	0.45	13.12	5.90	1.89	1.65	3.10	0.39	1.22	7.12	10.64%
Northeast Utilities	NU	0.70	$23.31	2.25	0.95	1.00	1.15	20.25	21.25	25.00	176.00	210.00	4.77	0.49	9.24	4.52	4.51	1.15	5.20	0.13	0.68	5.20	9.44%
NSTAR	NST	0.65	$31.75	3.25	1.53	1.63	1.95	17.60	18.55	22.00	106.81	106.81	6.16	0.40	15.19	6.08	0.00	1.80	0.00	0.45	0.00	6.08	11.22%
Pacific Gas & Electric Corp	PCG	0.55	$39.92	4.25	1.68	1.80	2.20	27.80	29.80	36.25	370.00	405.00	6.92	0.48	12.11	5.84	2.29	1.44	3.28	0.30	1.00	6.84	11.35%
Pinnacle West Capital	PNW	0.75	$31.87	3.25	2.10	2.10	2.20	32.95	33.65	36.50	101.50	112.00	1.56	0.32	9.02	2.92	2.49	0.97	2.41	-0.03	-0.08	2.83	9.21%
Portland General Electric	POR	0.75	$19.40	2.00	1.01	1.05	1.20	20.70	21.35	24.00	75.15	80.00	4.55	0.40	8.50	3.40	1.58	0.94	1.48	-0.07	-0.10	3.30	8.89%
Progress Energy	PGN	0.65	$38.80	3.60	2.48	2.50	2.56	31.95	33.05	36.80	280.00	288.00	0.79	0.29	9.96	2.88	0.71	1.21	0.86	0.18	0.15	3.03	9.11%
Public Service Enterprise Gr	PEG	0.80	$31.98	3.75	1.33	1.40	1.70	17.05	18.90	24.25	506.00	490.00	6.69	0.55	16.11	8.80	-0.80	1.88	-1.50	0.47	-0.70	8.10	12.32%
Southern Co.	SO	0.55	$31.42	3.00	1.73	1.80	2.00	18.05	18.95	21.50	796.00	823.00	3.57	0.33	14.25	4.75	0.84	1.74	1.46	0.43	0.62	5.37	10.84%
TECO Energy, Inc.	TE	0.85	$13.18	1.40	0.80	0.80	0.90	9.70	10.05	11.75	214.00	218.00	4.00	0.36	12.23	4.37	0.46	1.36	0.63	0.26	0.17	4.53	10.52%
Vectren Corp.	VVC	0.75	$23.61	2.20	1.35	1.39	1.51	17.30	17.80	20.50	81.00	83.00	2.80	0.31	10.98	3.45	0.61	1.36	0.83	0.27	0.22	3.67	9.42%
Wisconsin Energy	WEC	0.65	$43.85	4.50	1.35	1.55	2.15	30.20	32.20	38.00	117.00	117.00	11.52	0.52	12.17	6.35	0.00	1.45	0.00	0.31	0.00	6.35	10.39%
Xcel Energy, Inc.	XEL	0.65	$19.38	2.00	0.97	1.00	1.10	15.90	16.50	19.00	456.00	464.00	3.23	0.45	10.77	4.85	0.44	1.22	0.53	0.18	0.10	4.94	9.88%
Average		0.70	$31.02	3.21										Average	**11.64**							Average	**10.44%**
														Median	**10.75**							Median	**10.19%**

Exhibit___(RGR-1)
Schedule 5

Central Hudson Gas and Electric Corporation

Cases 09-E-0588 and 09-G-0589

Iculation of Value Line Composite Cost of E

	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)	(T)	(U)	(V)	(W)	(X)
									# of	# of	DPS	Retention	Return on		Increase						
		EPS	DPS	DPS	DPS	BPS	BPS	BPS	Shares	Shares	Growth	Rate	Equity		in	MBR				Sustainable	Long-Form
Company	Price	2012-14	###	2010	2012-14	2009	2010	2012-14	2009	2012-14	2012-14	2013	2013	B x R	Shares	2009	S Factor	V Factor	S x V	Growth	ROE
Value Line Industrial Composite	33.40	3.30	0.80	0.84	0.96	12.10	12.50	15.65	200.00	190.00	4.55	0.71	21.88	15.51	-1.27	2.76	-3.52	0.64	##	13.27	15.20%

Source: Cols. (D) - (M)
Value Line Selection & Opinion
November 6, 2009.

SPREADS BETWEEN 3-YEAR AND 1-YEAR TREASURY SECURITIES

				Difference:
		1 Year	3 Year	3 Yr - 1 Yr
	Oct-04	2.23	2.85	0.62
	Nov-04	2.50	3.09	0.59
	Dec-04	2.67	3.21	0.54
	Jan-05	2.86	3.39	0.53
	Feb-05	3.03	3.54	0.51
	Mar-05	3.30	3.91	0.61
	Apr-05	3.32	3.79	0.47
	May-05	3.33	3.72	0.39
	Jun-05	3.36	3.69	0.33
	Jul-05	3.64	3.91	0.27
	Aug-05	3.87	4.08	0.21
	Sep-05	3.85	3.96	0.11
	Oct-05	4.18	4.29	0.11
	Nov-05	4.33	4.43	0.10
	Dec-05	4.35	4.39	0.04
	Jan-06	4.45	4.35	-0.10
	Feb-06	4.68	4.64	-0.04
	Mar-06	4.77	4.74	-0.03
	Apr-06	4.90	4.89	-0.01
	May-06	5.00	4.97	-0.03
	Jun-06	5.16	5.09	-0.07
	Jul-06	5.22	5.07	-0.15
	Aug-06	5.08	4.85	-0.23
	Sep-06	4.97	4.69	-0.28
	Oct-06	5.01	4.72	-0.29
	Nov-06	5.01	4.64	-0.37
	Dec-06	4.94	4.58	-0.36
	Jan-07	5.06	4.79	-0.27
	Feb-07	5.05	4.75	-0.30
	Mar-07	4.92	4.51	-0.41
	Apr-07	4.93	4.60	-0.33
	May-07	4.91	4.69	-0.22
	Jun-07	4.96	5.00	0.04
	Jul-07	4.96	4.82	-0.14
	Aug-07	4.47	4.34	-0.13
	Sep-07	4.14	4.06	-0.08
	Oct-07	4.10	4.01	-0.09
	Nov-07	3.50	3.35	-0.15
	Dec-07	3.26	3.13	-0.13
	Jan-08	2.71	2.51	-0.20
	Feb-08	2.05	2.19	0.14
	Mar-08	1.54	1.80	0.26
	Apr-08	1.74	2.23	0.49
	May-08	2.06	2.69	0.63
	Jun-08	2.42	3.08	0.66
	Jul-08	2.28	2.87	0.59
	Aug-08	2.18	2.70	0.52
	Sep-08	1.91	2.32	0.41
	Oct-08	1.42	1.86	0.44
	Nov-08	1.07	1.51	0.44
	Dec-08	0.49	1.07	0.58
	Jan-09	0.44	1.13	0.69
	Feb-09	0.62	1.37	0.75
	Mar-09	0.64	1.31	0.67
	Apr-09	0.55	1.32	0.77
	May-09	0.50	1.39	0.89
	Jun-09	0.51	1.76	1.25
	Jul-09	0.48	1.55	1.07
	Aug-09	0.46	1.65	1.19
	Sep-09	0.40	1.48	1.08
	Average Ending October 2009:			
	5 Year			0.24
	2 1/2 Year			0.40
	1 Year			0.82
	6 Months			1.04
	3 Months			1.11

SORTED SPREADS BETWEEN 3-YEAR AND 1-YEAR TREASURY SECURITIES

					SORTED Difference:
			1 Year	3 Year	3 Yr - 1 Yr
		Mar-07	4.92	4.51	-0.41
		Nov-06	5.01	4.64	-0.37
		Dec-06	4.94	4.58	-0.36
		Apr-07	4.93	4.60	-0.33
		Feb-07	5.05	4.75	-0.30
		Oct-06	5.01	4.72	-0.29
		Sep-06	4.97	4.69	-0.28
		Jan-07	5.06	4.79	-0.27
		Aug-06	5.08	4.85	-0.23
		May-07	4.91	4.69	-0.22
		Jan-08	2.71	2.51	-0.20
		Nov-07	3.50	3.35	-0.15
		Jul-06	5.22	5.07	-0.15
		Jul-07	4.96	4.82	-0.14
		Aug-07	4.47	4.34	-0.13
		Dec-07	3.26	3.13	-0.13
		Jan-06	4.45	4.35	-0.10
		Oct-07	4.10	4.01	-0.09
		Sep-07	4.14	4.06	-0.08
		Jun-06	5.16	5.09	-0.07
		Feb-06	4.68	4.64	-0.04
		May-06	5.00	4.97	-0.03
		Mar-06	4.77	4.74	-0.03
		Apr-06	4.90	4.89	-0.01
		Dec-05	4.35	4.39	0.04
		Jun-07	4.96	5.00	0.04
		Nov-05	4.33	4.43	0.10
		Sep-05	3.85	3.96	0.11
		Oct-05	4.18	4.29	0.11
		Feb-08	2.05	2.19	0.14
		Aug-05	3.87	4.08	0.21
		Mar-08	1.54	1.80	0.26
		Jul-05	3.64	3.91	0.27
		Jun-05	3.36	3.69	0.33
		May-05	3.33	3.72	0.39
		Sep-08	1.91	2.32	0.41
		Nov-08	1.07	1.51	0.44
		Oct-08	1.42	1.86	0.44
		Apr-05	3.32	3.79	0.47
		Apr-08	1.74	2.23	0.49
		Feb-05	3.03	3.54	0.51
		Aug-08	2.18	2.70	0.52
		Jan-05	2.86	3.39	0.53
		Dec-04	2.67	3.21	0.54
		Dec-08	0.49	1.07	0.58
		Nov-04	2.50	3.09	0.59
		Jul-08	2.28	2.87	0.59
		Mar-05	3.30	3.91	0.61
		Oct-04	2.23	2.85	0.62
		May-08	2.06	2.69	0.63
		Jun-08	2.42	3.08	0.66
		Mar-09	0.64	1.31	0.67
		Jan-09	0.44	1.13	0.69
		Feb-09	0.62	1.37	0.75
		Apr-09	0.55	1.32	0.77
		May-09	0.50	1.39	0.89
		Jul-09	0.48	1.55	1.07
		Sep-09	0.40	1.48	1.08
		Aug-09	0.46	1.65	1.19
		Jun-09	0.51	1.76	1.25

SPREADS BETWEEN 3-YEAR AND 1-YEAR TREASURY SECURITIES

		1 Year	3 Year	Difference: 3 Yr - 1 Yr	
1985		8.42	9.64	1.22	
1986		6.45	7.06	0.61	
1987		6.77	7.68	0.91	
1988		7.65	8.26	0.61	
1989		8.53	8.55	0.02	
1990		7.89	8.26	0.37	
1991		5.86	6.82	0.96	
1992		3.89	5.30	1.41	
1993		3.43	4.44	1.01	
1994		5.32	6.27	0.95	
1995		5.94	6.25	0.31	
1996		5.52	5.99	0.47	
1997		5.63	6.10	0.47	
1998		5.05	5.14	0.09	
1999		5.08	5.49	0.41	
2000		6.11	6.22	0.11	
2001		3.49	4.09	0.60	
2002		2.00	3.10	1.10	
2003		1.24	2.10	0.86	
2004		1.89	2.78	0.89	
2005		3.62	3.93	0.31	
2006		4.94	4.77	-0.17	
2007		4.53	4.35	-0.18	
2008		1.83	2.24	0.41	
* 2009		0.51	1.44	0.93	(January - September)
Averages Ending 2009:	25 Years	4.86	5.45	0.59	
	20 Years	4.19	4.96	0.77	
	15 Years	3.83	4.27	0.44	
	10 Years	3.02	3.50	0.49	
	5 Years	3.09	3.35	0.26	
Medians Ending 2009:	25 Years			0.60	
	20 Years			0.47	
	15 Years			0.41	
	10 Years			0.51	
	5 Years			0.31	
5-Year Averages Ending:	1989	7.56	8.24	0.67	
	1994	5.28	6.22	0.94	
	1999	5.44	5.79	0.35	
	2004	2.95	3.66	0.71	
	2009	3.09	3.35	0.26	

COMPARISON OF RECENT AND PROJECTED INTEREST RATES									
	Average: July-September 2009		2010		2011		2012		2013	
10-Year Treasury Note										
Recent	3.52	%								
Projections:										
Blue Chip Financial										
Forecasts 12/01/09			3.8	%	4.5	%	5.0	%	5.3	%
Value Line Quarterly										
Economic Review 11/27/09			3.7	%	4.2	%	4.3	%	4.5	%
AAA Corporate Bond Rate										
Recent	5.27	%								
Projections:										
Blue Chip Financial										
Forecasts 12/01/09			5.4	%	5.9	%	6.3	%	6.6	%
Value Line Quarterly										
Economic Review 11/27/09			5.8	%	6.3	%	6.4	%	6.5	%