BEFORE THE NEW YORK STATE PUBLIC SERVICE COMMISSION

In the matter of:

APPLICATION OF CONSOLIDATED)

EDISON COMPANY OF NEW YORK) CASE NO. 07-E-0523 _____

FOR AN INCREASE IN ELECTRIC RATES)

REBUTTAL TESTIMONY

OF

ROGER A. MORIN, PhD

September 2007

CONSOLIDATED EDISON COMPANY OF NEW YORK

REBUTTAL TESTIMONY OF DR. ROGER A. MORIN

1 Q. PLEASE STATE YOUR NAME, ADDRESS, AND OCCUPATION.

2 A. My name is Dr. Roger A. Morin. My business address is Georgia State University,

3 Robinson College of Business, University Plaza, Atlanta, Georgia, 30303. I am Emeritus

4 Professor of Finance at the College of Business, Georgia State University and Professor

5 of Finance for Regulated Industry at the Center for the Study of Regulated Industry at

6 Georgia State University. I am also a principal in Utility Research International, an

7 enterprise engaged in regulatory finance and economics consulting to business and

8 government.

9 **Q.   DID YOU FILE DIRECT TESTIMONY IN THIS PROCEEDING ON**

10 **BEHALF OF CONSOLIDATED EDISON COMPANY OF NEW YORK?**

11 A. Yes, I did.

12 **Q.   WHAT IS THE PURPOSE OF THIS REBUTTAL TESTIMONY?**

13 A.   I will respond to certain statements contained in the direct testimony of: 1) Mr.

14 Augstell and Mr. Hogan ("Finance Panel") on behalf of the New York State Department

15 of Public Service ("DPS Staff or "Staff"), 2) Mr. Niazi on behalf of the New York State

16 Consumer Protection Board ("CPB"), 3) the New York Power Authority ("NYPA")

17 panel, and 4) Mr. Liberty and Mr. Radigan on behalf of the County of Westchester

18 ("COW").

19 **Q. PLEASE DESCRIBE HOW YOUR REBUTTAL TESTIMONY IS**

20 **ORGANIZED.**

21 A. My rebuttal testimony is organized in four sections, corresponding to each of the

22 aforementioned testimonies.

1 **Q. PLEASE SUMMARIZE THE RATE OF RETURN RECOMMENDATIONS**

2 **OF THE FOUR WITNESSES YOU ARE REBUTTING IN THIS CASE.**

3 A. The rate of return on common equity capital ("ROE") recommended by each party I

4 am rebutting in this case is as follows:

5	Staff	8.9%
6	CPB	9.0%
7	NYPA	9.5%
8	COW	9.7%

9

10   Given that CPB witness Mr. Niazi's testimony is almost an exact replica of Staff's

11 testimony, most of my rebuttal comments are directed to the latter and are applicable to

12 Mr. Niazi's testimony as well. My comments on the NYPA panel's testimony are

13 extremely brief, given that they devote only two pages to the rate of return issue.   The

14 same is true for the COW panel's rate of return testimony, where approximately one page

15 is devoted to the rate of return issue.

16   **I. REBUTTAL OF STAFF'S TESTIMONY**

17 **Q. PLEASE SUMMARIZE STAFF'S RATE OF RETURN RECOMMENDATION.**

18 A. Staff recommends that a ROE allowance of only 8.9% be employed on the common

19 equity capital of Consolidated Edison Company of New York ("CECONY" or the

20 "Company"). In determining CECONY's cost of common equity capital, Staff applies a

21 two-stage DCF analysis to a group of twenty-nine electric utilities. For the first-stage

22 growth component of the DCF analysis, Staff relies on Value Line's forecast dividend

23 estimates over the next few years.   For the more important second-stage growth

1   component that drives the vast majority of the DCF results, Staff uses the earnings

2   retention method, also known as the "sustainable growth" method, again using Value

3   Line estimates as input data.

4   Staff also applies a Capital Asset Pricing Model ("CAPM") and an Empirical

5   CAPM ("ECAPM") (also referred to as a "zero beta" CAPM) analysis to the same group

6   of companies, using an average of 10-year and 30-year Treasury bond yields as proxies

7   for the risk-free rate and Value Line beta estimates. Staff's estimate of the market risk

8   premium ("MRP") component of the CAPM is based on a single Merrill Lynch estimate.

9   Applying a weight of two-thirds to the DCF results and one-third to the CAPM-ECAPM

10   average result, Staff concludes that CECONY's cost of common equity capital is 8.9%,

11   inclusive of a flotation cost allowance of 20 basis points and after a return decrement of

12   39 basis points in order to account for CECONY's superior credit quality and revenue

13   decoupling mechanism ("RDM").

14   **Q. WHAT IS YOUR GENERAL REACTION TO STAFF'S COST OF COMMON**

15   **EQUITY RECOMMENDATION?**

16   A. My general reaction is that the testimony contains major infirmities. The single-digit

17   ROE recommendation of only 8.9% would be the lowest in the country for a major

18   investor-owned electric utility. Moreover, it rests heavily on the results of a DCF

19   analysis and on a particularly fragile rendition of the DCF approach. The latter is largely

20   based on the questionable results of the earnings retention growth version of the DCF

21   model. That method requires Staff to assume the investor's expected ROE. But the latter

22   is precisely what we are trying to determine in this proceeding. It is therefore both

23   illogical and circular to assume an ROE in order to determine an ROE. Not only has

1 Staff relied heavily on a circular methodology but Staff also has put most of its eggs in

2 the DCF basket, which causes Staff to recommend a return that is below investors'

3 required returns. The CAPM and ECAPM analyses are also questionable because of an

4 understated MRP component, as I discuss below.

5 **Q. WHAT ARE YOUR BASIC CONCLUSIONS REGARDING STAFF'S COST**

6 **OF EQUITY TESTIMONY?**

7 A.   A proper application of cost of capital methodologies would provide results

8 substantially higher than those obtained by Staff. As I will explain, several of Staff's

9 errors alone result in Staff's understating CECONY's cost of common equity by

10 approximately 200 basis points (2.0%). Correcting these errors would bring the Staff

11 recommended ROE to almost 11.0%, which is close to my recommended ROE.

12 **Q. PLEASE SUMMARIZE YOUR COMMENTS ON STAFF'S TESTIMONY.**

13 A.   I stress from the start that I agree with certain of Staff's views and procedures. I

14 agree broadly with: (i) the use of several methodologies in estimating a fair return on

15 common equity, although I disagree with the weights accorded to each method, (ii) the

16 sample of electric utility companies in the DCF and CAPM analyses; (iii) the magnitude

17 of the risk-free rate in the CAPM analysis, and (iv) the magnitude of the beta estimates in

18 the CAPM analysis.

19   I have eleven (11) specific disagreements with Staff's testimony:

20   **1. Unreliable Recommendation.** Staff's ROE recommendation is unreasonably

21 low, and is not a reliable estimate of CECONY's cost of equity capital given the heavy

22 reliance on one particular and fragile cost of equity methodology, which is known to

23 understate investor returns, namely, the DCF method.

1   **2. Allowed returns.** Staff's recommended return is completely outside the zone

2   of currently allowed rates of return for its sample companies and would constitute, the

3   lowest allowed ROE in the country for a major electric utility.

4   **3. The DCF Model Understates the Cost of Equity.** It is well-known that

5   application of the DCF model to utility stocks understates the investor's expected return

6   when the Market-to-Book ("M/B") ratio exceeds unity. This is particularly relevant in

7   the current capital market environment where utility stocks, including Staff's sample

8   companies, are trading at M/B ratios well above unity.

9   **4. DCF Functional Form.** Staff relies on the annual form rather than on the

10   quarterly version of the DCF model, understating the cost of equity by 20 basis points.

11   **5. The use of an average 6-month stock price in the DCF model**. Staff's

12   application of the DCF model violates market efficiency principles and mismatches stock

13   price and expected growth.

14   **6. DCF Earnings Retention Growth.** Staff's principal, and in fact only,

15   technique for estimating the long-term growth component of the DCF model is the

16   earnings retention growth technique. There is a logical inconsistency in the retention

17   growth technique because Staff is forced to assume the answer to implement the method.

18   From Staff's own evidence, investors expect substantially higher returns for utilities than

19   what Staff recommends.

20   **7. DCF Growth Rates: Analysts' Forecasts.** Investors are expecting

21   substantially higher growth rates than Staff's growth rates for the sample companies.

22   **8. DCF Growth Rates: Long-term Economic Growth.** Staff's long-term

23   growth forecast for the comparable group of electric utilities, based on the earnings

1   retention growth method, understates the long-term expected GDP nominal growth by

2   approximately 140 basis points (1.4%).

3   **9. CAPM Market Risk Premium.**   Staff's MRP is understated and ignores the

4   vast literature on the subject. Using the appropriate MRP, Staff's CAPM estimates are to

5   be raised by 100 basis points from this correction alone.

6   **10. Return Adjustments.**   Staff's downward ROE adjustments for credit quality

7   differences and RDM should be rejected by the Commission**.**

8   **11. Criticisms of my testimony.**   Staff's criticisms of my ROE recommendation

9   are without foundation.

10   **1. UNRELIABLE RECOMMENDATION**

11   **Q. STAFF RELIES HEAVILY ON ONE METHODOLOGY, NAMELY THE DCF**

12   **METHOD. DOES THIS AFFECT THE RELIABILITY OF STAFF'S RESULTS?**

13   A.   Yes, very much so. The 8.9% cost of equity recommended by Staff is unreasonably

14   low and well outside reasonable limits of probability, and is not a reliable estimate of

15   CECONY's cost of equity capital.

16   There are four broad generic methodologies available to measure the cost of

17   equity: DCF, Risk Premium, CAPM, which are market-oriented, and Comparable

18   Earnings, which is accounting-oriented. Each generic market-based methodology in turn

19   contains several variants. Staff has chosen to rely heavily on the DCF method and to a

20   much smaller extent on the CAPM, giving two-thirds weight to the DCF results, only

21   one-third to the CAPM and ECAPM results, and no weight at all to the Risk Premium or

22   Comparable Earnings methodologies.

23   As I discussed in my Direct Testimony, when measuring equity costs, which

1   essentially deals with the measurement of investor expectations, no one single

2   methodology provides a foolproof panacea. Each methodology requires the exercise of

3   considerable judgment on the reasonableness of the assumptions underlying the

4   methodology and on the reasonableness of the proxies used to validate the theory. The

5   failure of the traditional infinite growth DCF model to account for changes in relative

6   market valuation, and the practical difficulties of specifying the expected growth

7   component, discussed in my original testimony, are vivid examples of the potential

8   shortcomings of the DCF model. It follows that several methodologies should be

9   employed in arriving at a judgment on the cost of equity and that these methodologies

10   should be weighted equally.

11   There is no single model that conclusively determines or estimates the expected

12   return for an individual firm. Each methodology possesses its own way of examining

13   investor behavior, its own premises, and its own set of simplifications of reality. Each

14   method proceeds from different fundamental premises that cannot be validated

15   empirically. Investors do not necessarily subscribe to any one method, nor does the stock

16   price reflect the application of any one single method by the price-setting investor.

17   There is no monopoly as to which method is used by investors. Absent any hard

18   evidence as to which method outdoes the other, all relevant market-based evidence

19   should be used and weighted equally, in order to minimize judgmental error,

20   measurement error, and conceptual infirmities. There is no guarantee that a single DCF

21   result is necessarily the ideal predictor of the stock price and of the cost of equity

22   reflected in that price, just as there is no guarantee that a single CAPM or Risk Premium

23   result constitutes the perfect explanation of that stock price.

1 **Q. DOES THE FINANCIAL LITERATURE SUPPORT THE USE OF SEVERAL**

2 **METHODOLOGIES?**

3 A. Yes, it does. As I discussed in my direct testimony, the financial literature strongly

4 supports the use of multiple methods. While it is certainly appropriate to use the DCF

5 methodology to estimate the cost of equity, there is no proof that the DCF produces a

6 more accurate estimate of the cost of equity than other methodologies. Heavy reliance on

7 the DCF model ignores the capital market evidence and financial theory formalized in the

8 CAPM and other risk premium methods. The DCF model is one of many tools to be

9 employed in conjunction with other methods to estimate the cost of equity. It is not a

10 superior methodology that supplants other financial theory and market evidence.

11 **Q. DOES THE DCF MODEL NEED TO BE APPLIED WITH EXTREME**

12 **CAUTION?**

13 A. Yes, it does. Caution has to be used in applying the DCF model to utility stocks for

14 four reasons. The first reason is that the stock price used as input in the dividend yield

15 component may be unduly influenced by structural changes and changing investor

16 expectations in the utility industry. Stock prices can also be influenced by mergers and

17 acquisitions possibilities, by speculation concerning asset restructurings and deregulation of

18 certain assets, and by corporate takeover rumors.

19 The second reason is that the traditional DCF model is based on a number of

20 assumptions, some of which may be unrealistic in a given capital market environment. For

21 example, the standard infinite growth DCF model assumes a constant market valuation

22 multiple, that is, a constant price/earnings ("P/E") ratio. In other words, the model assumes

23 that investors expect the ratio of market price to dividends (or earnings) in any given year to

1   be the same as the current price/dividend (or earnings) ratio. This must be true if the infinite

2   growth assumption is made. This assumption is somewhat unrealistic given the surges in

3   P/E ratios experienced by utility stocks in the last decade.

4   Several fundamental and structural changes have transformed the utility industry

5   from the times when the standard DCF model and its assumptions were developed by

6   Professor Gordon.   Increased competition triggered by national policy, such as FERC Order

7   888, re-prescription of capital recovery rates, changes in customer attitudes regarding utility

8   services, the evolution of alternative energy and information sources, deregulation, and

9   mergers-acquisitions have all influenced stock prices in ways vastly different from the early

10   assumptions of the DCF model developed in the early 1970s. These changes suggest that

11   some of the raw assumptions underlying the standard DCF model are questionable, and that

12   the DCF model should be complemented by several alternate methodologies to estimate the

13   cost of common equity.

14   Contrary to the standard DCF assumption of a constant P/E ratio, stock prices may

15   not necessarily be expected to grow at the same rate as earnings and dividends by investors.

16   This is especially true in the short run. Investors may very well assume that the P/E ratio

17   will in fact continue to increase in the short run, fueling the expected rate of return. The

18   converse is also true. P/E ratios have proved volatile and unstable in recent years. The

19   essential point is that the constancy of the P/E ratio required in the standard DCF model may

20   not always be a valid assumption. To the extent that increases (decreases) in relative market

21   valuation are anticipated by investors, especially myopic investors with short-term

22   investment horizons, the standard DCF model will understate (overstate) the cost of equity.

23   Another concern deals with the realism of the constant growth rate assumption and

1   with the difficulty of finding an adequate proxy for that growth rate. The standard DCF

2   model assumes that a single growth rate of dividends is applicable in perpetuity. It is

3   difficult to imagine that today's energy utility industry can be described as stable. Not only

4   is the constant growth rate assumption somewhat unrealistic, but it is difficult to proxy.

5   Analysts' growth forecasts are usually made for not more than two to five years, or if they

6   are made for more than a few years, they are dominated by the near-term earnings and

7   dividends picture. In short, the perpetual growth term of the DCF model does not square

8   well with the shorter-term focus of institutional investors.

9   In summary, caution and judgment are required in interpreting the results of the DCF

10   model. There is a clear need to go beyond the DCF model, accord it the weight it deserves,

11   and to examine the results produced by several alternate methodologies as I did in my direct

12   testimony.

13   **Q.   IS THERE ANY EVIDENCE THAT STAFF'S DCF RESULTS ARE**

14   **UNRELIABLE?**

15   A. Yes, there is. I have examined Staff's DCF results on Exhibit __ (FP-8). The DCF

16   results shown in the last column are scattered all over, ranging from a low of 6.4% to a

17   high of 15.4%. Several estimates are barely above the cost of debt for these companies.

18   The huge variability in the results demonstrates the lack of reliability of the DCF

19   approach and the need to employ, and rely more heavily upon, a variety of methodologies

20   when estimating the cost of capital.

CONSOLIDATED EDISON COMPANY OF NEW YORK

REBUTTAL TESTIMONY OF DR. ROGER A. MORIN

1   **2. ALLOWED RETURNS**

2   **Q. IS STAFF'S RATE OF RETURN RECOMMENDATION COMPATIBLE**

3   **WITH CURRENTLY ALLOWED RETURNS IN THE UTILITY INDUSTRY?**

4   A. No, not at all. Allowed returns, while certainly not a precise indication of a

5   company's cost of equity capital, are nevertheless important determinants of investor

6   growth perceptions and investor expected returns. They also serve to provide some

7   perspective on the validity and reasonableness of Staff's recommendation.

8   I have examined the ROEs currently allowed for the 29 electric utilities in Staff's

9   comparable group as reported in the AUS Utility Reports survey for September 2007.

10   The currently authorized ROEs for Staff's sample of electric utilities, shown in Table 1

11   below, average 11.1%.

1   Table 1 Authorized ROEs
2   Staff's Comparable Group
3

	Company Name	Allowed ROE
1	ALLETE	11.60
2	Alliant Energy	11.02
3	Amer. Elec. Power	11.05
4	Ameren Corp.	10.37
5	Cleco Corp.	11.25
6	Consol. Edison	10.87
7	DPL Inc.	11.00
8	DTE Energy	11.00
9	Duke Energy	11.18
10	Edison Int'l	11.60
11	Empire Dist. Elec.	10.90
12	Entergy Corp.	10.81
13	Exelon Corp.	10.05
14	FPL Group	11.75
15	Hawaiian Elec.	10.82
16	IDACORP Inc.	
17	MGE Energy	11.00
18	NiSource Inc.	11.75
19	Northeast Utilities	9.86
20	NSTAR	12.50
21	PG&E Corp.	11.35
22	Pinnacle West Capital	10.75
23	Portland General	10.80
24	Progress Energy	12.42
25	Southern Co.	12.20
26	Vectren Corp.	10.53
27	Westar Energy	10.00
28	Wisconsin Energy	11.20
29	Xcel Energy Inc.	10.92
	AVERAGE	11.09

4   Source: AUS Utility Reports 09/2007

5

6   The average ROE currently allowed for the overall combination gas & electric

7   industry is 10.83% and 11.0% for the overall electric utility industry, well above Staff's

1   anemic recommendation of only 8.9%.

2   In short, Staff's ROE recommendation is well outside the mainstream of the

3   allowed rates of return that were current during the period in which Staff performed its

4   analysis, lies outside the zone of recently authorized ROEs for electric utilities and for its

5   own sample of companies, and would constitute the lowest ROE allowance in the country

6   for a major utility.   The Commission is not bound by decisions of other regulators

7   regarding allowed ROE, but one cannot overlook the glaring difference between Staff's

8   recommendation and the returns currently allowed for the very same firms that Staff

9   deems comparable in risk.

10   Unreasonable rate treatment for a New York utility, if implemented, may have

11   serious public policy implications and repercussions for the State of New York, which are

12   not mentioned in Staff's testimony.   For example, the quality of regulation and the

13   reasonableness of rate of return awards clearly have implications for regulatory climate,

14   economic development and job creation in a given territory. The consistency of

15   regulation in a given state has similar implications.   It is my belief that Staff's

16   recommended return has serious negative implications on these grounds and is not

17   consistent with the economic well-being of the State.

18
19   **3. DCF MODEL UNDERSTATES THE COST OF EQUITY**

20   **Q. DO STAFF'S DCF RESULTS UNDERSTATE THE COST OF EQUITY?**

21   A. Yes, they do, and so does my own DCF results for that matter. Application of the

22   DCF model produces estimates of common equity cost that are consistent with investors'

23   expected return only when stock price and book value are reasonably similar, that is,

1   when the M/B ratio is close to unity. The simple numerical illustration shown in my direct

2   testimony demonstrated that when the DCF cost rate is applied to a book value rate base

3   well above the market price, the DCF cost rate understates the investor's required return.

4   This is particularly relevant in the current capital market environment where

5   utility stocks are trading at M/B ratios well above unity and have been for two decades.

6   The converse is also true, that is, the DCF model overstates the investor's return when the

7   stock's M/B ratio is less than unity. The reason for the distortion is that the DCF market

8   return is applied to a book value rate base by the regulator, that is, a utility's earnings are

9   limited to earnings on a book value rate base.

10   Therefore, the DCF cost rate understates the investor's required return when stock

11   prices are well above book, as is the case presently, and Staff's DCF results understate

12   CECONY's cost of common equity capital.

13   **Q. DO REGULATORS SHARE THESE RESERVATIONS ON THE**

14   **RELIABILITY OF THE DCF MODEL?**

15   A.   Yes, I believe they do. As I indicated in my direct testimony, while a vast majority

16   of regulatory commissions do not rely solely on the DCF model results in setting the

17   allowed rate of return on common equity, some regulatory commissions have explicitly

18   recognized the need to avoid excessive reliance upon the DCF model and have

19   acknowledged the need to adjust the DCF result when M/B ratios exceed one[1].

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[1] See the Indiana Utility Regulatory Commission decision in Indiana Mich. Power Co. (IURC 8/24/90), Cause No. 38728, 116 PUR4th 1, 17-18. See also the Iowa Utilities Board decision in U.S. West Communications, Inc., Docket No., RPR-93-9, 152 PUR4th, 459. See also the Hawaii Public Utilities Commission decision in Hawaiian Electric Company, Inc., Docket No. 6998, PUR4th, 134.

1   **4. DCF FUNCTIONAL FORM**

2   **Q. WHAT IS THE APPROPRIATE FORM OF THE DCF MODEL?**

3   A. The annual DCF model used by Staff ignores the time value of quarterly dividend

4   payments and assumes that dividends are paid once a year at the end of the year. Staff

5   admits as much on page 32, lines 13-14, that it has assumed that dividends are paid

6   annually. Since investors are aware of the quarterly timing of dividend payments, this

7   knowledge is reflected in stock prices. As I show in Chapter 11 of my book, *The New*

8   *Regulatory Finance*, the use of the annual version of the DCF model understates the cost

9   of equity by approximately 20 basis points, depending on the magnitude of the dividend

10   yield component. Staff is totally silent on the dividend timing issue.

11   By analogy, a bank rate on deposits that does not take into consideration the

12   timing of the interest payments understates the true yield if you receive the interest

13   payments more than once a year. The actual yield will exceed the stated nominal rate.

14   To illustrate, if an investor has a choice between investing $1,000 in a bank account

15   which promises a return of 10% compounded annually and another bank account which

16   promises a return of 10% but compounded quarterly, he will clearly select the latter. Due

17   to the quarterly compounding of interest, the investor earns an effective return of 10.38%

18   on the latter bank account versus 10% on the former. The same is true for the return on

19   common stocks. Staff has thus understated investor return by 20 basis points in its DCF

20   analysis from this source alone.

21   **5. DCF STOCK PRICE**

22   **Q. CAN YOU COMMENT ON STAFF'S STOCK PRICE IN ITS DCF MODEL?**

23   A. In the implementation of the DCF model, shown on Exhibit__(FP-8) , Staff uses the

1   average stock price over the six months prior to July 2007. I disagree with the use of

2   such a stale stock price reaching as far back as January 2007.   The stock price to employ

3   is the current price of the security at the time of estimating the cost of equity, rather than

4   some historical average stock price reaching back six months. The reason is that the

5   analyst is attempting to determine a utility's cost of equity in the future, and since current

6   stock prices provide a better indication of expected future prices than any other price

7   according to the basic tenets of the Efficient Market Hypothesis, the most relevant stock

8   price is the most recent one. The Efficient Market Hypothesis, which is widely accepted,

9   states that capital markets, at least as a practical matter, incorporate into security prices

10   relevant publicly available information, such that current security prices reflect the most

11   recent information and thus are the best representation of investor expectations. Use of

12   any other price violates market efficiency principles.

13   There is yet another justification for using current stock prices. In measuring the

14   cost of equity as the sum of dividend yield and growth, the period used in measuring the

15   dividend yield component must be consistent with the estimate of growth with which it is

16   paired. Since the current stock price is caused by the growth foreseen by investors at the

17   present time and not at any other time, it is clear that the use of spot prices is preferable.

18   Staff has essentially mismatched a stale average stock price reaching as far back as

19   January 2007 with a current estimate of expected growth. This not only violates market

20   efficiency principles, but also constitutes a mismatch in the application of the DCF

21   model.   A stock price dating back six months reflects stale information and is not

22   representative of current market conditions.

23   An analogy with interest rates will clarify this point. If, for example, interest rates

1   have climbed from 5% to 6% over the past three months, it would be incorrect to state

2   that the current interest rate is in the range of 5% to 6% just because this is the interest

3   rate range for the past six months. Analogously, it is incorrect to state that the cost of

4   equity, which has also risen along with interest rates, is in some given six-month range.

5   Just as the current interest rate is 6%, the cost of equity estimate is that which is obtained

6   from the standard DCF using current spot prices.

7   **6.   EARNINGS RETENTION GROWTH METHOD**

8   **Q. WHAT SPECIFIC DCF METHODOLOGY DID STAFF EMPLOY TO**

9   **DETERMINE THE COST OF EQUITY?**

10   A.   Staff applied a two-stage DCF analysis to a sample of 29 electric utilities, using the

11   earnings retention growth method as a proxy for the expected long-term growth

12   component in the second stage. Using an average retention growth rate of 5.0% [Column

13   W of Exhibit _(FP-8) page 2] produced an average DCF cost of equity estimate of 8.33%

14   reported on the last column of the same exhibit.

15   **Q. PLEASE COMMENT ON STAFF'S GROWTH ESTIMATE IN THE DCF**

16   **MODEL.**

17   A.   Staff relies exclusively on the earnings retention growth method in the crucial second

18   stage of his DCF analysis, where the growth rate is based on the equation $g = b(ROE)$,

19   where b is the percentage of earnings retained and ROE is the expected ROE.   The

20   impact of external stock financing on growth is also accounted for by adding an external

21   growth term ($g = sv$).

22   I seriously disagree with the earnings retention growth technique for four reasons:

23   1) the method is logically circular, 2) inconsistency with the academic empirical

1   evidence, 3) the potential lack of representativeness of Value Line's forecasts as proxies

2   for the market consensus, and 4) a technical error.

3   **Q. ARE THE GROWTH RATES USED BY STAFF CONSISTENT WITH ITS**

4   **RATE OF RETURN RECOMMENDATION?**

5   A. No, they are not. Staff's retention growth methodology contains a puzzling logical

6   contradiction. This is because the method requires an explicit assumption on the ROE

7   expected from the retained earnings that drive future growth. Staff bases its ROE

8   estimate on Value Line's forecast ROE for the 2011 period. But the ROEs used by Staff

9   in calculating the retention growth rate do not match Staff's ROE recommendation. The

10   table below replicates the ROE forecasts used by Staff in deriving the retention growth

11   rates.

12   The average expected ROE of 11.4% used in Staff's retention growth computation

13   and reported on Exhibit _(FP-8) exceeds the recommended 8.90%. Staff is assuming in

14   effect that the sample companies will earn a ROE exceeding what it has determined to be

15   their cost of equity forever. That is, Staff is assuming that these companies will earn a

16   ROE higher than that granted by their regulators and reflected in their rates. While this

17   scenario implicit in Staff's retention growth method may be imaginable for an

18   unregulated company with substantial market power, it is implausible to assume for a

19   regulated company whose rates are continually re-set by its regulator at a level designed

20   to permit the company to earn a return equal to its cost of capital, and because the

21   regulator may take steps to halt and/or recapture such earnings, as is currently the

22   situation confronting CECONY's affiliated utility company, Orange and Rockland, in

23   Case 06-E-1433. I consider this logical flaw damaging to the integrity of Staff's analysis,

1   and consider it to be a sufficient basis for rejecting Staff's results produced by this

2   method, which constitute the cornerstone of its ROE recommendation. In essence, Staff

3   is using an ROE that differs from its final recommended cost of equity, and is requesting

4   the Commission to make two inconsistent findings regarding ROE. I am perplexed as to

5   why Staff assumes that its group of comparable electric utilities is expected to earn

6   11.4% forever, while at the same time it recommends an ROE of only 8.90% for

7   CECONY. The only way that these utilities can earn an ROE of 11.4% is if rates are set

8   so that they will in fact earn 11.4%. The only logical conclusion to be drawn from the

9   data is that the group's cost of equity is 11.4%, since these are the returns implied in

10   Staff's retention growth analysis.

1   **Table 2 Staff's Forecast ROE**

2

1	ALLETE	14.1
2	Alliant Energy	10.1
3	Amer. Elec. Power	9.4
4	Ameren Corp.	13.0
5	Cleco Corp.	9.7
6	Consol. Edison	9.1
7	DPL Inc.	21.8
8	DTE Energy	9.9
9	Duke Energy	8.1
10	Edison Int'l	10.9
11	Empire Dist. Elec.	11.1
12	Entergy Corp.	12.9
13	Exelon Corp.	21.6
14	FPL Group	12.5
15	Hawaiian Elec.	11.8
16	IDACORP Inc.	7.5
17	MGE Energy	13.5
18	NiSource Inc.	7.3
19	Northeast Utilities	8.1
20	NSTAR	15.7
21	PG&E Corp.	11.0
22	Pinnacle West Capital	8.6
23	Portland General	8.4
24	Progress Energy	9.3
25	Southern Co.	13.1
26	Vectren Corp.	10.6
27	Westar Energy	9.8
28	Wisconsin Energy	11.0
29	Xcel Energy Inc.	10.5
	AVERAGE	**11.4%**

3   Source: Staff Exhibit _(FP-8) Page 2

4

5   **Q. IS THE RETENTION GROWTH RATE TECHNIQUE CONSISTENT WITH**

6   **THE EMPIRICAL EVIDENCE?**

7   A. No, it is not. The second difficulty with the retention growth rate approach is that the

1   empirical finance literature demonstrates this particular method of determining growth is

2   a very poor explanatory variable of market value, and is not as significantly correlated to

3   measures of value, such as stock price and price/earnings ratios.

4   **Q. ARE VALUE LINE'S ROE AND RETENTION RATIO ESTIMATES**

5   **REPRESENTATIVE OF THE MARKET CONSENSUS?**

6   A. No. The third difficulty with Staff's retention growth rates is that exclusive reliance

7   on a Value Line forecast of ROE and retention ratio runs the risk that Value Line

8   forecasts are not representative of investors' consensus forecast. As discussed below,

9   averages of analysts' growth forecasts are reliable estimates of the investors' consensus

10   expectations likely to be impounded in stock prices.

11   **Q. PLEASE DISCUSS THE FOURTH PROBLEM WITH STAFF'S RETENTION**

12   **GROWTH ESTIMATES.**

13   A.   The fourth difficulty with Staff's retention growth approach is that the forecasts of

14   the expected return on equity published by Value Line are based on end-of-period book

15   equity rather than on average book equity. The following formula, discussed and derived

16   in Chapter 9 of my latest book, <u>The New Regulatory Finance</u>, adjusts the reported end-of-

17   year values so that they are based on average common equity, which is the common

18   regulatory practice:

19
20
21
$$r_a \ = \ r_t \ \frac{2 \, B_t}{B_t + B_{t-1}}$$

22

23   Where: r_a = return on average equity

24   r_t = return on year-end equity as reported

25   B_t = reported year-end book equity of the current year

1   B_{t-1} = reported year-end book equity of the previous year

2

3   The result of this error is that Staff's DCF estimates are understated by some 10-

4 20 basis points, depending on the magnitude of the book value growth rate.

5   **7. DCF GROWTH RATES: ANALYSTS' FORECASTS**

6 **Q. WHAT DOES THE PUBLISHED ACADEMIC LITERATURE SAY ON THE**

7 **SUBJECT OF GROWTH RATES IN THE DCF MODEL?**

8 A. Published studies in the academic literature demonstrate that growth forecasts made

9 by security analysts are reasonable indicators of investor expectations, and that investors

10 rely on analysts' forecasts.

11 **Q. DO YOU SEE ANY DANGERS IN RELYING ON VALUE LINE AS AN**

12 **EXCLUSIVE SOURCE OF FORECASTS IN APPLYING THE DCF MODEL?**

13 A. Yes, I do. Staff relies exclusively on Value Line forecasts for its major inputs into the

14 DCF analysis, including short-term dividend forecasts, expected return, new stock issues,

15 and expected retention ratio. Staff's heavy reliance on Value Line growth forecasts runs

16 the real risk that such forecasts are not representative of investors' consensus forecast.

17 One would expect that averages of a myriad analysts' growth forecasts such as those

18 contained in First Call, Thomson, Multex, and/or Zacks, rather than one particular

19 analyst's forecast, are more reliable estimates of the investors' consensus expectations

20 likely to be impounded in stock prices.

21 **Q. ARE INVESTORS EXPECTING GROWTH RATES EQUAL TO STAFF'S**

22 **RANGE?**

23 A. No. The best evidence shows that investors are expecting growth rates higher than

1 Staff has found. For its group of 29 electric utilities, Staff has found [see Columns N and

2 W page 2 of Exhibit _(FP-8) page 2] average growth rates of 4.3% and 5.0% for the first

3 and second stage of the DCF analysis, respectively. The table below reports the

4 consensus analysts' long-term growth forecast from both Value Line and Zacks

5 Investment Research, as reported in the Value Line data base. The average long-term

6 growth forecast for the group from Value Line and Zacks are 6.1% and 6.9%,

7 respectively (midpoint 6.5%). This is almost 180 basis points (1.8%) above Staff's long-

8 term growth estimate of 4.3% - 5.0% (midpoint 4.7%).

9 **Q. HOW WOULD STAFF'S DCF RESULT CHANGE USING ANALYSTS'**

10 **GROWTH FORECAST INSTEAD OF THE ILL-FATED EARNINGS**

11 **RETENTION GROWTH METHOD IN ITS SECOND DCF ANALYSIS?**

12 A. Using Value Line's growth forecast and/or the consensus growth forecast of 6.1% -

13 6.9% instead of Staff's 4.3% - 5.0% in Staff's Exhibit _(FP-8) would increase the DCF

14 estimate of the cost of common equity by approximately 180 basis points (1.8%), that is,

15 from 8.33% to 10.13%.

1   Table 3 Staff's Comparable Companies

2   Analysts' Growth Forecasts

Company	Value Line Projected Growth	Zacks Analysts Growth
1 ALLETE	10.5	5.0
2 Alliant Energy	5.0	6.0
3 Amer. Elec. Power	6.5	4.7
4 Ameren Corp.	2.5	7.8
5 Cleco Corp.	4.0	12.0
6 Consol. Edison	3.5	3.5
7 DPL Inc.	7.0	8.7
8 DTE Energy	4.0	5.7
9 Duke Energy	14.5	9.4
10 Edison Int'l	6.5	9.3
11 Empire Dist. Elec.	11.0	3.0
12 Entergy Corp.	7.5	10.8
13 Exelon Corp.	9.5	10.5
14 FPL Group	8.0	9.8
15 Hawaiian Elec.	4.0	4.9
16 IDACORP Inc.	2.5	6.0
17 MGE Energy	6.5	
18 NiSource Inc.	8.5	6.3
19 Northeast Utilities	2.5	3.5
20 NSTAR	12.0	13.0
21 PG&E Corp.	4.0	8.6
22 Pinnacle West Capital	3.5	6.7
23 Portland General		
24 Progress Energy	3.0	4.4
25 Southern Co.	3.0	4.4
26 Vectren Corp.	4.5	4.3
27 Westar Energy	4.5	4.5
28 Wisconsin Energy	7.0	9.3
29 Xcel Energy Inc.	5.5	4.5
Averages	**6.1**	**6.9**

3   Source: Value Line Investment Analyzer 08/07

1 **8. DCF GROWTH: LONG-TERM ECONOMIC GROWTH**

2 **Q.   IS STAFF'S CHOICE OF GROWTH RATES CONSISTENT WITH THE**

3 **LONG-TERM GROWTH OF THE U.S. ECONOMY?**

4 A.   No, it is not. Staff's average growth rates of 4.3% - 5.0% are quite inconsistent with

5 the very long-term growth of the economy. Because the growth term of the DCF model

6 is perpetual in nature, it is quite reasonable to assume that a utility's long-term growth

7 profile will match the overall growth of the economy.

8   Long-term forecasts of nominal growth in GDP are available from commercial

9 sources, such as Standard & Poor's DRI and Blue Chip Forecast. Additionally, a long-term

10 forecast of nominal growth in GDP can be formulated by combining a long-term inflation

11 estimate with a long-term real growth rate forecast as follows:

12   GDP Nominal Growth = GDP Real Growth + Expected Inflation

13   The growth rate in U.S. real GDP has been reasonably stable over time.

14 Therefore, its historical performance is a reasonable estimate of expected long-term

15 future performance.   The growth in real GDP for the 1929-2006 period was

16 approximately 3.4%.   The long-term expected inflation rate can be obtained by

17 comparing the yield on long-term U.S. Treasury bonds with the yield on inflation-

18 adjusted bonds of the same maturity.   The current yield on 20-year Treasury bonds is

19 4.9%, and the yield on inflation-adjusted bonds ("Treasury Inflation Protected

20 Securities," or "TIPS") for the same maturity is 2.4%.   The difference between the two

21 securities yields an approximate inflation rate of 2.5% (4.9% – 2.4% = 2.5%).

22   Using the above formula, the long-term expected GDP nominal growth is

23 approximately 5.9% (3.4% + 2.5% = 5.9%). In sum, Staff's growth forecast of 4.3% -

1   5.1% (midpoint 4.7%) for its comparable group of electric utilities understates the long-

2   term expected GDP nominal growth by approximately 120 basis points (1.2%).

3   **Q. HOW WOULD STAFF'S DCF RESULT CHANGE IF A MORE**

4   **REASONABLE GDP GROWTH FORECAST IS USED IN ITS SECOND DCF**

5   **ANALYSIS?**

6   A. Using the projected long-term growth of GDP of 5.9% instead of Staff's 4.3% - 5.1%

7   (midpoint 4.7%) in Staff's Exhibit _(FP-8) would increase the DCF estimate of the cost

8   of common equity from 8.33 to 9.53% from this flaw alone.

9   **9. CAPM: MARKET RISK PREMIUM (MRP)**

10   **Q. WHAT INPUTS DOES STAFF USE IN ITS CAPM ANALYSIS?**

11   A. Three inputs are required in order to implement the CAPM: the risk-free rate, the

12   beta risk measure, and the MRP. For the risk-free rate, Staff uses 4.83%. For beta, Staff

13   uses 0.93, based on Value Line beta estimates for its sample of electric companies. For

14   the MRP, Staff uses 6.02%, based solely on a Merrill Lynch estimate (page 35, line 5).

15   **Q. DO YOU AGREE WITH STAFF'S RISK-FREE RATE?**

16   A. Yes, I agree with the magnitude of Staff's risk-free rate. The current level of U.S.

17   30-year Treasury bond yield is coincidentally similar to Staff's assumed 4.83% for the

18   past six months.

19   **Q. DO YOU AGREE WITH STAFF'S BETA ESTIMATES?**

20   A. Yes, I do.

21   **Q. HOW DOES STAFF ESTIMATE THE MARKET RISK PREMIUM**

22   **COMPONENT OF THE CAPM?**

23   A. In order to determine the MRP component of the CAPM, Staff relies on Merrill

1   Lynch's in-house forecast of 10.85% for the overall equity market. Subtracting Staff's

2   risk-free rate of 4.83%, we obtain a MRP of 6.02%

3   **Q. IS MERRILL LYNCH'S ESTIMATE OF THE MRP REPRESENTATIVE OF**

4   **THE MARKET CONSENSUS?**

5   A. No. The major difficulty with Staff's MRP estimate is that exclusive reliance on

6   Merrill Lynch's in-house forecast is not representative of investors' consensus forecast.

7   **Q. IS STAFF'S ASSESSMENT OF THE MRP OF 6% CONSISTENT WITH THE**

8   **VAST LITERATURE ON THE SUBJECT?**

9   A.   No, not quite. Ibbotson's *Stocks, Bonds, Bills, and Inflation 2007 Yearbook* is a

10   primary source of data on U.S. capital market returns. This annual publication compiles

11   monthly returns to various asset classes from 1926 to date. From Ibbotson 2007, a broad

12   market sample of U.S. common stocks outperformed long-term U.S. government bonds

13   by 6.5%. The historical MRP over the income component of long-term Treasury bonds

14   rather than over the total return is 7.1%. It has been common practice to assume that this

15   historical result provides an adequate basis for the expected MRP.

16   In their widely-used textbook, Brealey, Myers & Allen state:

17   *We have no official position on the exact market risk premium, but we believe a*
18   *range of 6 to 8 percent is reasonable for the United States[2].*
19
20   Published work by Dimson, Marsh, and Staunton[3] report returns over the period

21   1900 to 2000 for twelve countries, representing 90% of today's world market

22   capitalization. They report an average risk premium over long bond returns over all

---

[2]Brealey, R., Myers, S., and Allen, P., *Principles of Corporate Finance,* 8th edition, New York: McGraw-Hill, 2006.
[3]Dimson, Elroy, Paul Marsh and Mike Staunton (2000) "Risk and Return in the 20th and 21st centuries." *Business Strategy Review* 11(2): 1-18.

1   countries of 5.6%, with the U.S. at 7.0%. The premium was generally higher for the

2   second half century than for the first. For example, the U.S. had 5% in the first half,

3   compared to 7.5% in the second half, again in excess of Staff's 6.1% estimate. Brealey,

4   Myers, and Allen op. cit. updated the Dimson study and found an average MRP of 6.5%

5   for the U.S.

6   A second approach to estimate the MRP is prospective in nature and consists of

7   applying the DCF model to an aggregate equity index, as I did in my direct testimony. A

8   prospective study cited in direct testimony and published in *Financial Management* by

9   Harris, Marston, Mishra, and O'Brien ("HMMO") provides estimates of the ex ante

10   expected returns for S&P 500 companies over the period 1983-1998.[4] From that study,

11   the average MRP estimate for the overall period is 7.2%, again in excess of Staff's 6.0%

12   estimate.

13   Staff criticizes the HMMO study on the grounds that it only covers a fifteen-year

14   period. Whenever using historical return risk premium data, one must rely on periods

15   long enough to smooth out short-term aberrations, and to encompass several business and

16   interest rate cycles. Over such long periods, surely investor expectations and realizations

17   converge. Realized risk premiums measured over short time periods, since they are

18   heavily dependent on short-term market movements, must be ignored.   However,

19   whenever using expected return data as opposed to historical return data, as is the case in

20   the Harris-Marston study, this is no longer necessary.

---

[4] Harris, R. S., Marston, F. C., Mishra, D. R., and O'Brien, Henry. J., "*Ex Ante* Cost of Equity Estimates of S&P 500 Firms: The Choice Between Global and Domestic CAPM," *Financial Management*, Autumn 2003, pp. 51-66.

1 **Q.   DR. MORIN, DO SURVEY TECHNIQUES PROVIDE RELIABLE**

2 **ESTIMATES OF THE MRP?**

3 A. No, they do not. Surveys of academics and investment professionals, for example the

4 Welch surveys[5] or the Duke CFO Outlook referred to on page 38 of Staff's testimony,

5 provide another technique of estimating the MRP. While this technique has the benefit of

6 being forward-looking, it is subject to the well-known shortcomings of survey

7 techniques. There are several reasons to place little weight on survey results relative to

8 the results from other approaches. First, return definitions and risk premium definitions

9 differ widely.   Second, survey responses are subject to bias.   Thirdly, subjective

10 assessments about long-term market behavior may well place undue weight on recent

11 events and immediate prospects.

12 **Q. IS STAFF'S MRP ESTIMATE CONSISTENT WITH REGULATORY**

13 **DECISIONS?**

14 A.   No, it is not. It is useful to examine the "reverse" MRP estimates implicit in

15 regulatory ROE decisions. The CAPM framework can be used to quantify the MRP

16 implicit in the allowed risk premiums for regulated utilities. According to the CAPM, the

17 risk premium is equal to beta times the market risk premium:

18 $$\text{Risk Premium}   =   \beta\,(R_M - R_F)$$

19 $$\text{Risk Premium}   =   \beta \times \text{MRP}$$

20   Solving for MRP, we obtain:

21 $$\text{MRP}   =   \text{Risk Premium} / \beta$$

---

[5] Welch, Ivo (2000, 2001), "Views of Financial Economists on the Equity Premium and on Professional Controversies," *Journal of Business* 73(4): 501-537.

1   I examined the MRPs implied in 178 regulatory decisions for electric utilities in

2   the United States over the period 1997-2006. Using the allowed average risk premium of

3   5.6% in these decisions over the last decade and an average beta of 0.80 for U.S. electric

4   utilities during that period, the implied market risk premium is 7.0%, again in excess of

5   Staff's estimate of 6.1%.

6   **Q. WHAT DO YOU CONCLUDE ON STAFF'S MRP ESTIMATE?**

7   A. All and all, the evidence points to a MRP estimate of at least 7%, well in excess of

8   Staff's 6% estimate. The net result is that Staff's CAPM estimate of CECONY's cost of

9   common equity is understated by almost 1.0%, which is the difference between 7.0% and

10   6.0% times Staff's Value Line beta estimate of 0.93. That would raise Staff's CAPM

11   estimate shown on page 3 of Exhibit __(FP-8) by about 100 basis points, that is, from

12   10.43 - 10.53% to almost 11.43% - 11.53%.

13   **10. RETURN ADJUSTMENTS**

14   **Q. DID STAFF PROPOSE A RETURN ADJUSTMENT TO THEIR ROE**

15   **RESULTS TO ACCOUNT FOR CREDIT QUALITY DIFFERENCES?**

16   A. Yes, it did. On page 41-43 of its testimony, Staff proposes that CECONY's ROE be

17   reduced by 29 basis points (0.29%) to account for credit quality differences between

18   CECONY and the proxy group. Staff argues that CECONY is less risky than the

19   comparable group because its bond ratings are slightly higher than those of the

20   comparable companies.

21   **Q. WHAT IS THE BASIS FOR STAFF'S DOWNWARD ROE ADJUSTMENT?**

22   A. The adjustment is based on the yield differentials between utility bonds rated A and

23   BBB over the past six months.

1 **Q.   DO YOU AGREE WITH STAFF'S 29 BASIS POINTS DOWNWARD**

2 **RETURN ADJUSTMENT?**

3 A. No, I do not.   First, it is based on bond yield differentials and not on common stock

4 return differentials.   Second, Staff along with the other parties who have filed rate of

5 return testimony in this proceeding, are completely silent on the fact that CECONY's

6 bonds have been teetering on the edge of a downgrade for some time.   Moreover,

7 nowhere in its testimony does Staff allude to CECONY's deteriorating credit rating.

8 CECONY's credit ratings are already fragile as indicated by the "negative outlook" status

9 of its bonds due in part to weak financial ratios. CECONY has a substantial construction

10 program in the future. The Company's ability to tap capital markets and attract funds on

11 reasonable terms occurs at a crucial point in time when CECONY has an ambitious

12 capital expenditures program and will require external financing.   CECONY's large

13 capital expenditure program over the next several years increases its dependence on

14 capital markets which have become volatile and more unpredictable. This is certainly no

15 time to apply a return decrement and reduce the Company's return relative to its industry

16 peers.

17   Third, if we take Staff's adjustment of 29 basis points at face value and apply it to

18 the Company's bonds, we end up with an implausible scenario.   The yield on the

19 Company's long-term bonds is approximately 6.0% at this time, according to Staff (page

20 42, line 8). If we apply Staff's downward adjustment of 29 basis points to the yield on

21 the Company's bonds, we end up with a yield of 5.7%. That would be less than the yield

22 on utility bonds rated AA, 5.84% according to Staff (page 32 line 6), a highly improbable

23 situation given that CECONY's bonds are rated single A and are already on negative

1   outlook with a high probability of a downgrade to the BBB level. This scenario is

2   unlikely and quite outside the bounds of reasonableness. It is even more unreasonable

3   and unlikely given that Staff recommends a ROE of only 8.9%, which would be the

4   lowest ROE in the country for a major energy utility.

5   In short, Staff's downward ROE adjustment of 29 basis points should be rejected

6   by the Commission.

7   **Q. IS THE SAME TRUE FOR STAFF'S DOWNWARD ADJUSTMENT FOR**

8   **THE RDM?**

9   A.   Yes, Staff's downward ROE adjustment of 10 basis points to account for what it

10   considers to be the risk-reducing effect of the RDM relative to the comparable companies

11   is also unwaranted. Not only is this 10 basis points adjustment arbitrary and plucked out

12   of thin air, but most, if not all, electric utilities in the industry are under some form of

13   adjustment clause/cost recovery/rider mechanisms. The approval of adjustment clauses,

14   riders, and cost recovery mechanisms by regulatory commissions is widespread in the

15   utility business and is already largely embedded in financial data, such as bond rating and

16   business risk scores. While adjustment clauses, riders, and cost tracking mechanisms

17   may mitigate (on an absolute basis but not on a relative basis) a portion of the risk and

18   uncertainty related to the day-to-day management of a regulated utility's operations, there

19   are other significant factors to consider that work in the reverse direction for CECONY,

20   for example, a huge capital spending program requiring external financing and weak

21   financial metrics, that offset the presence of the aforementioned mechanisms. The

22   experience with the operation of RDMs in general is very scant at this time, let alone the

23   specific RDM variant that the Commission may adopt. In that regard, the Staff RDM

1 Panel (p. 16), in discussing the Company's proposed revenue accounting and rate

2 incentive mechanism ("RARIM") in response to the Commission's revenue decoupling

3 mandate, speaks to the complexities of such mechanisms and the risk of unintended

4 consequences. In addition, the Staff RDM Panel recommends a mechanism that would

5 preclude the Company from adjusting actual revenues for weather before reconciling

6 forecasted revenues with actual revenues. While Staff attempts to brush aside the

7 Company's arguments regarding investor expectations of weather-related revenues due to

8 the absence of a formal study or analysis, it does not and cannot refute the fact that this

9 would be a material change in revenue retention practice for CECONY, that has, in some

10 years, provided material benefit to the Company as part of an overall comprehensive rate

11 plan. To suggest that the investor community would not take notice of this change is not

12 rational. Adjusting the ROE downward for the RDM, as Staff recommends, borders on

13 the inexplicable.

14   Moreover, a RDM can actually increase regulatory risks, particularly the risk of

15 the Commission denying timely recovery if deferred balances get too large. Again, the

16 recent Orange & Rockland temporary electric rate case is an example of actions the

17 Commission may choose to take based upon its view of the Company's current earnings

18 as compared with deferred balances. Therefore, it is speculative as to whether, and if so

19 how, a RDM will affect the Company's risk profile. Any RDM-related credit adjustment

20 therefore is plainly premature.

21   **11. RESPONSE TO STAFF'S CRITICISMS**

22   **Comparable Group**

23 **Q. HOW DO YOU RESPOND TO STAFF'S CRITICISM OF YOUR**

1 **COMPARABLE GROUP OF ELECTRIC UTILITIES?**

2 A.   On page 28, Staff expresses concern that my comparable group of electric utilities is

3 riskier than CECONY's parent company.   That is a strange and quite unwarranted

4 criticism given that the average beta risk of my group, 0.91, is less than the average beta

5 of 0.93 in Staff's group, and the same is true of the average bond rating of each group.

6 **Historical Risk Premium**

7 **Q. DO YOU AGREE WITH STAFF'S FIRST CRITICISM OF YOUR**

8 **HISTORICAL RISK PREMIUM STUDY?**

9 A.   No, I do not. On page 54, Staff argues that I have not demonstrated whether CECONY

10 is more or less risky than the companies that make up Moody's Electric Utility Index over

11 the 1926-2005 period. I disagree. Over most of the long period that covers my historical

12 risk premium study, 1926-2005, the electric utility was relatively homogenous in risk and

13 under the umbrella protection of regulation for all of its functions (power generation,

14 transmission, distribution).

15 **Q. DO YOU AGREE WITH STAFF'S SECOND CRITICISM OF YOUR**

16 **HISTORICAL RISK PREMIUM STUDY?**

17 A.   No, I do not. On pages 54-55, Staff critiques the risk premium method on the grounds

18 that the method assumes that the risk premium is constant over time, that is, that the risks

19 of Treasury securities have remained at the same level relative to the risks of the electric

20 utility stocks.

21 This criticism is unwarranted. To the extent that the historical equity risk

22 premium estimated follows what is known in statistics as a random walk, one should

23 expect the equity risk premium to remain at its historical mean. The best estimate of the

1 future risk premium is the historical mean. As I explained in my direct testimony, since I

2 found no evidence that the market price of risk or the amount of risk in common stocks

3 has changed over time, that is, no significant serial correlation in the successive market

4 risk premiums from year to year, it is reasonable to assume that these quantities will

5 remain stable in the future.

6   On page 54, Staff critiques my historical risk premium analysis on the grounds

7 that the electric industry is rapidly changing. I certainly agree that the risk of the electric

8 utility industry has intensified steadily in the past decade. Hence, my historical risk

9 premium analysis provides a conservative downward-biased estimate of the current risk

10 posture of the industry and CECONY.

11 **Q. IS THE RISK PREMIUM METHODOLOGY CONSISTENT WITH**

12 **FINANCIAL THEORY?**

13 A.   It certainly is. The Risk Premium approach is conceptually sound and firmly rooted in

14 the conceptual framework of Capital Market Theory. It is widely used by analysts,

15 investors, and expert witnesses. Most college-level corporate finance and/or investment

16 management texts contain detailed conceptual and empirical discussion of the risk

17 premium approach.[6] The latter is typically recommended as one of the three leading

18 methods of estimating the cost of capital.[7] Techniques of risk premium analysis are

19 widespread in investment community reports. Professional certified financial analysts

20 are certainly well versed in the use of this method.

21   Data requirements to implement the method are not prohibitive. The methodology is

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[6] See Bodie, Z., Kane, A., and Marcus, A. J., *Investments*, McGraw-Henry Irwin, 6th ed., 2005, a recommended textbook for Chartered Financial Analyst certification and examination.
[7] See Brigham and Erhhardt (2005), Corporate Finance: A Focused Approach, 2nd ed., Thomson 2006.

1   responsive to changes in capital market conditions and provides a timely signaling device

2   for current interest rate trends in contrast to the DCF method, which may be sluggish in

3   detecting changes in return requirements, especially when based on historical data. One

4   advantage of risk premium over DCF is that the former takes a broader time-series

5   perspective rather than a snapshot point-in-time viewpoint, and is therefore less vulnerable

6   to the vagaries of any one particular capital market environment.

7   **Allowed Returns**

8   **Q.   PLEASE RESPOND TO STAFF'S CRITICISM OF ALLOWED RISK**

9   **PREMIUMS BY REGULATORS.**

10   A.   On pages 53-56 of its testimony, Staff argues that the determination of an allowed

11   return is flawed because I have not factored in particular features associated with past

12   ROE decisions, such as multi-year rate plans and stayout premiums. I note that several

13   ROE awards are part of incentive mechanisms with substantial upside potential, so that

14   the allowed risk premium is more often than not understated. In other words, my allowed

15   risk premium estimate is very likely a conservative one.

16   **DCF Growth Rates**

17   **Q. PLEASE COMMENT ON STAFF'S CRITICISM OF YOUR DCF ANALYSIS.**

18   A.   On page 45, Staff criticizes my DCF earnings growth rates on the grounds that I have

19   not addressed how these earnings growth estimates relate to the dividend payout policies

20   of my companies and whether they are sustainable over time. I totally disagree with this

21   point of view. One of the key assumptions that underlies the DCF model is that earnings,

22   dividends, book value, and market price all grow at a constant rate forever.   In other

23   words, the dividend payout ratio remains constant over time. That is the assumption I

1   made, and that is the assumption that Staff also made in the second stage of its DCF

2   analysis. In my direct testimony and earlier in my rebuttal, I discussed the merits of

3   using consensus analysts' earnings growth forecasts in the DCF model and the supportive

4   empirical literature.

5   **Q. DO YOU AGREE WITH STAFF'S VIEWS ON DIVIDEND GROWTH?**

6   A. No, I do not. Staff, moreover, argues on page 30 that the DCF calculation requires

7   dividend growth rather than earnings growth because dividends constitute the cash flows

8   received by the investor, and that I should have relied on dividend growth instead of

9   earnings growth. I disagree. First, it is clear that dividend growth can only be sustained if

10 there is growth in earnings. Since the ability to pay dividends stems from a company's

11 ability to generate earnings, growth in earnings per share can be expected to strongly

12 influence the market's dividend growth expectations.

13   Second, from a practical perspective, casual inspection of the Zacks Investment

14 Research, First Call Thompson, and Multex Web sites, among others, reveals that

15 earnings per share forecasts dominate the information provided. There are few, if any,

16 dividend growth forecasts. Only Value Line provides comprehensive long-term dividend

17 growth forecasts. The wide availability of earnings forecasts is not surprising. There is

18 an abundance of evidence attesting to the importance of earnings in assessing investors'

19 expectations. The sheer volume of earnings forecasts available from the investment

20 community relative to the scarcity of dividend forecasts attests to their importance. The

21 fact that these investment information providers focus on growth in earnings rather than

22 growth in dividends indicates that the investment community regards earnings growth as

23 a superior indicator of future long-term growth.

1 **Q. DO YOU AGREE WITH STAFF'S POSITION THAT THERE IS NO**

2 **EVIDENCE THAT DIVIDEND POLICIES WILL CONTINUE TO TREND**

3 **DOWNWARD?**

4 A. No, I do not. On page 31, Staff argues that while historical dividend growth has

5 moderated relative to earnings growth, this trend is not expected to continue in the future.

6 One only has to examine Staff's own data source, namely Value Line, and look at the

7 earnings growth and dividend growth projections for Staff's comparable group of

8 companies to see that, indeed, the decline in dividend payout is expected to continue.

9 The table below shows projected earnings growth and projected dividend growth for

10 Staff's sample of 29 companies. The dividend growth of 5.3% is significantly less than

11 both Value Line's projected earnings growth of 6.1% and the analysts' consensus growth

12 projection of 6.9%.

1   Table 4 Staff's Comparable Companies

2   Earnings vs. Dividend Growth Forecasts

Company	Value Line Earnings Growth	Zacks Analysts Growth	Value Line Dividend Growth
[1] ALLETE	10.5	5.0	14.0
[2] Alliant Energy	5.0	6.0	5.5
[3] Amer. Elec. Power	6.5	4.7	7.5
[4] Ameren Corp.	2.5	7.8	
[5] Cleco Corp.	4.0	12.0	5.0
[6] Consol. Edison	3.5	3.5	1.0
[7] DPL Inc.	7.0	8.7	3.5
[8] DTE Energy	4.0	5.7	2.5
[9] Duke Energy	14.5	9.4	3.5
[10] Edison Int'l	6.5	9.3	7.5
[11] Empire Dist. Elec.	11.0	3.0	1.5
[12] Entergy Corp.	7.5	10.8	7.0
[13] Exelon Corp.	9.5	10.5	6.0
[14] FPL Group	8.0	9.8	7.5
[15] Hawaiian Elec.	4.0	4.9	
[16] IDACORP Inc.	2.5	6.0	
[17] MGE Energy	6.5		1.0
[18] NiSource Inc.	8.5	6.3	7.0
[19] Northeast Utilities	2.5	3.5	1.5
[20] NSTAR	12.0	13.0	6.5
[21] PG&E Corp.	4.0	8.6	15.0
[22] Pinnacle West Capital	3.5	6.7	4.0
[23] Portland General			
[24] Progress Energy	3.0	4.4	1.0
[25] Southern Co.	3.0	4.4	4.0
[26] Vectren Corp.	4.5	4.3	3.0
[27] Westar Energy	4.5	4.5	6.0
[28] Wisconsin Energy	7.0	9.3	7.0
[29] Xcel Energy Inc.	5.5	4.5	5.0
Averages	**6.1**	**6.9**	**5.3**

3   Source: Value Line Investment Analyzer 08/07

4

5   The major point of all this is that dividend growth rates are unlikely to provide a

1   meaningful guide to investors' growth expectations for utilities in general. This result is

2   because utilities' dividend policies have become increasing conservative as business risks

3   in the industry have intensified steadily. Dividend growth has remained largely stagnant

4   in past years as utilities are increasingly conserving financial resources in order to hedge

5   against rising business risks. As a result, investors' attention has shifted from dividends

6   to earnings. Therefore, earnings growth provides a more meaningful guide to investors'

7   long-term growth expectations. In short, Staff should have relied on long-term earnings

8   growth forecasts in its DCF analysis.

9   **CONCLUSIONS**

10 **Q. WHAT RETURNS ARE INVESTORS EXPECTING FOR STAFF'S GROUP**

11 **OF COMPANIES?**

12 A. As shown in Table 2, investors are expecting an average ROE of 11.4%.

13 **Q. WHAT IS THE AVERAGE AUTHORIZED ROE FOR STAFF'S GROUP OF**

14 **COMPANIES?**

15 A. As shown in Table 1, the average authorized ROE for these comparable companies is

16 11.1%.

17 **Q. WHAT ROE DOES STAFF RECOMMEND?**

18 A. Staff's recommended ROE is 8.90%.

19 **Q.   WHAT ROE SHOULD STAFF'S ANALYSIS PRODUCE WHEN ADJUSTED**

20 **FOR THE REASONS YOU HAVE EXPLAINED?**

21 A.   Applying the various changes and corrections I have outlined in my rebuttal, Staff's

22 analysis indicates a conservative return of 11%, as shown below.

23 **Q. WHAT DO YOU CONCLUDE FROM STAFF'S COST OF CAPITAL**

1 **TESTIMONY?**

2 A. My general conclusions are:

3   **1. Unreliable Recommendation.** Staff's ROE recommendation is unreasonably

4 low, and is not a reliable estimate of CECONY's cost of equity capital given Staff's

5 heavy reliance on one particular and fragile cost of equity methodology, which is known

6 to understate investor returns.

7   **2. Allowed returns.** Staff's recommended return is well outside the zone of

8 currently allowed rates of return for its sample companies and would be by far the lowest

9 ROE award in the country for a major energy utility.

10   **3. The DCF Model Understates the Cost of Equity.** It is well-known that

11 application of the standard DCF model to utility stocks understates the investor's

12 expected return when the M/B ratio exceeds unity. This is particularly relevant in the

13 current capital market environment where utility stocks, including Staff's sample

14 companies, are trading at M/B ratios well above unity.

15   **4. DCF Functional Form.** Staff relies on the annual form rather than on the

16 quarterly version of the DCF model, understating the cost of equity by 20 basis points.

17   **5. Stock Price in the DCF model**. Staff's application of the DCF model violates

18 market efficiency principles and mismatches stock price and expected growth.

19   **6. DCF Earnings Retention Growth.** There is a logical inconsistency in the

20 retention growth technique because Staff is forced to assume the answer to implement the

21 method. From Staff's own evidence, investors expect substantially higher returns for

22 utilities than what Staff recommends.

23   **7. DCF Growth Rates: Analysts' Forecasts.** Investors are expecting

1   substantially higher growth rates than Staff's 4.3% first-stage growth rate and 5.0%

2   second-stage growth rate for the sample companies.   Using Value Line's growth forecast

3   and the analysts consensus growth forecast increases Staff's DCF estimates by 180 basis

4   points.

5   **8.   DCF Growth Rates: Long-term Economic Growth.**   Staff's long-term

6   growth forecast of 5.0% for its comparable group of electric utilities based on the

7   earnings retention growth method understates the long-term expected GDP nominal

8   growth by approximately 120 basis points (1.2%).

9   **9.   CAPM Market Risk Premium.**   Staff's MRP is understated and ignores the

10 vast literature on the subject.   Using the appropriate MRP, Staff's CAPM estimates

11 would be raised by 100 basis points from this correction alone.

12 **10.   Return Ajdustments.**   Staff's downward ROE adjustments for credit quality

13 differences and RDM should be rejected by the Commission**.**

14 **11.   Criticisms of my testimony.**   Staff's criticisms of my direct testimony are

15 without foundation.

16 **Q.   WHAT   IS   YOUR   MAJOR   CONCLUSION   FROM   STAFF'S   ROE**

17 **RECOMMENDATION?**

18 A.   Staff's recommended ROE is vastly understated.   Recognition of the proper

19 functional form of the DCF model (20 basis points) and a much greater emphasis on

20 analysts' growth forecasts in the DCF analysis (180 basis points) would raise its DCF

21 estimate from 8.33% to 10.33% without flotation costs and to 10.53% with Staff's 20

22 basis points flotation cost allowance.   Recognition of the appropriate MRP in the CAPM

23 analysis raises Staff's CAPM estimates from 10.43 - 10.53% to almost 11.43% - 11.53%

1 (midpoint 11.5%) without flotation costs. Giving a two-third weight to the amended

2 DCF result of 10.3% and a one-third weight to the amended CAPM result of 11.5%

3 brings Staff's recommendation to 10.7% without flotation costs and almost 11% with

4 flotation costs. All and all, correcting for the various flaws in Staff's testimony would

5 suggest much higher returns that are quite close to my own ROE recommendation for

6 CECONY. I consider my critique conservative, for it does not reflect the consistent

7 tendency of the DCF to understate the cost of equity, nor does it reflect the

8 understatement of the cost of equity, which results from the plain vanilla annual form of

9 CAPM analysis used by Staff.

10   **II.   COMMENTS ON MR. NIAZI'S TESTIMONY**

11 **Q. PLEASE SUMMARIZE MR. NIAZI'S RATE OF RETURN ON EQUITY**

12 **RECOMMENDATION.**

13 A.   Mr. Niazi recommends that a return allowance of 9.0% be applied to CECONY's

14 common equity capital for ratemaking purposes.

15 **Q. DO YOU HAVE ANY GENERAL COMMENT ON MR. NIAZI'S**

16 **TESTIMONY?**

17 A.   In determining the cost of equity, Mr. Niazi presents a testimony which is virtually

18 identical to Staff's testimony. Given this similarity, all the rebuttal comments directed at

19 Staff are equally applicable to Mr. Niazi's testimony.

20   Also, both Mr. Niazi and Staff direct very similar criticisms of my own direct

21 testimony, namely on the issue of the Risk Premium methodology and choice of

22 comparable companies. Given the nearly identical nature of both testimonies, my

23 responses to Staff's criticisms are equally applicable to Mr. Niazi's testimony.

1

2   **III.**   **COMMENTS ON MESSRS. LIBERTY & RADIGAN'S TESTIMONY**

3 **Q.** **PLEASE SUMMARIZE MESSRS. LIBERTY & RADIGAN'S RATE OF**

4 **RETURN ON EQUITY RECOMMENDATION.**

5 A.   Messrs. Liberty & Radigan recommend that a return allowance of 9.7% be applied

6 to CECONY's common equity capital for ratemaking purposes. In determining the cost

7 of equity, Messrs. Liberty & Radigan base their recommendation on returns allowed in

8 several recent NYPSC cases, particularly the 9.7% in the Company's last gas base rate

9 case (Case 06-G-1332). I would note in passing that Mr. Dowling, who submitted

10 testimony on behalf of Consumer Power Advocates (at 2) also seems to be advocating

11 that the Commission adopt an ROE of 9.7%. His "analysis" suffers from the same faults

12 (discussed below) as that of Messrs. Liberty & Radigan and therefore also should be

13 rejected by the Commission.

14   This approach stands in sharp contrast with the estimation practices of expert

15 witnesses on cost of capital who have provided detailed, factually supported, professional

16 testimony setting forth the results of rigorous analysis. The Commission, investment

17 analysts, finance experts, corporate analysts, and finance professionals normally rely on a

18 variety of such scholarly financial analyses and models, employing methodologies such

19 as DCF, Prospective Risk Premium, Historical Risk Premium, Comparable Earnings and

20 the CAPM.

21 **Q. DO YOU HAVE ANY GENERAL COMMENT ON MESSRS. LIBERTY &**

22 **RADIGAN'S TESTIMONY?**

23 A.   Yes. By their own admission on page 13, Messrs. Liberty & Radigan admit to no

1   professional expertise on cost of capital or utility capital structure. With all due respect

2   to Messrs. Liberty & Radigan, perhaps that explains the fact that they have offered no

3   independent evidence of their own and have limited the rate of return portion of their

4   testimony to approximately two pages.

5   **Q. DID MESSRS. LIBERTY & RADIGAN INDEPENDENTLY DEVELOP ANY**

6   **SAMPLES OF COMPARABLE RISK COMPANIES IN ORDER TO ARRIVE AT**

7   **THEIR RECOMMENDATION?**

8   A.   No, they did not.

9   **Q. DID MESSRS. LIBERTY & RADIGAN PERFORM A DCF ANALYSIS IN**

10   **ORDER TO ARRIVE AT THEIR RECOMMENDATION?**

11   A.   No, they did not.

12   **Q. DID MESSRS. LIBERTY & RADIGAN PERFORM A CAPM ANALYSIS IN**

13   **ORDER TO ARRIVE AT THEIR RECOMMENDATION?**

14   A.   No, they did not.

15   **Q.   DID MESSRS. LIBERTY & RADIGAN PERFORM AN INDEPENDENT**

16   **RISK   PREMIUM   ANALYSIS   IN   ORDER   TO   ARRIVE   AT   THEIR**

17   **RECOMMENDATION?**

18   A.   No, they did not.

19   **Q.   DID MESSRS. LIBERTY & RADIGAN PERFORM A COMPARABLE**

20   **EARNINGS   ANALYSIS   IN   ORDER   TO   ARRIVE   AT   THEIR**

21   **RECOMMENDATION?**

22   A.   No, they did not.

23

1 **Q. WHAT DO YOU CONCLUDE FROM THE RATE OF RETURN**

2 **RECOMMENDATION OF MESSRS. LIBERTY & RADIGAN?**

3 A. In view of the deficiencies outlined above, the Commission should ignore their

4 recommendation. I do note, however, that their testimony further undercuts the

5 reasonableness of the Staff and CPB ROE recommendations.

6 **IV.   COMMENTS ON THE NYPA PANEL'S ROE TESTIMONY**

7 **Q. PLEASE SUMMARIZE THE NYPA PANEL'S ROE RECOMMENDATION.**

8 A. Messrs. Chamberlin, Bennett, and Hedman, on behalf of NYPA, recommend (at 14) a

9 ROE allowance of 9.5%. In determining the cost of common equity, NYPA bases its

10 recommendation on vague generalities on Con Edison's common stock performance and

11 earnings stability. Its entire ROE recommendation of 9.5% rests on the 10.3% average

12 electric utility industry nationwide award in the past 1 ½ years and that "*the level allowed*

13 *to Con Edison should be well below that, and the 9.5% to which we understand the*

14 *Company agreed in the recent gas case….*". First, I would note that the ROE reflected in

15 the most recent CECONY gas rate plan is 9.7%, not 9.5%. In addition, other than a few

16 pages of generalities on the relative risk of CECONY, no other evidence is presented.

17 Moreover, for reasons outlined above, NYPA's proposed downward ROE adjustment

18 related to the RDM is inappropriate.

19 This extremely narrow approach stands in sharp contrast with the estimation

20 practices of expert witnesses on cost of capital who have previously provided detailed,

21 factually supported, professional testimony setting forth the results of rigorous analysis.

22 The Commission, investment analysts, finance experts, corporate analysts, and finance

23 professionals normally rely on a variety of such scholarly financial analyses and models,

1   employing methodologies such as DCF, Prospective Risk Premium, Historical Risk

2   Premium, Comparable Earnings and the CAPM.

3   **Q. DID THE NYPA PANEL INDEPENDENTLY DEVELOP ANY SAMPLES OF**

4   **COMPARABLE COMPANIES TO ARRIVE AT THEIR RECOMMENDATION?**

5   A.   No, they did not.

6   **Q. DID THE NYPA PANEL PERFORM A DCF ANALYSIS IN ORDER TO**

7   **ARRIVE AT THEIR RECOMMENDATION?**

8   A.   No, they did not.

9   **Q. DID THE NYPA PANEL PERFORM A CAPM ANALYSIS IN ORDER TO**

10   **ARRIVE AT THEIR RECOMMENDATION?**

11   A.   No, they did not.

12   **Q. DID THE NYPA PANEL PERFORM AN INDEPENDENT RISK PREMIUM**

13   **ANALYSIS IN ORDER TO ARRIVE AT THEIR RECOMMENDATION?**

14   A.   No, they did not.

15   **Q.   DID THE NYPA PANEL PERFORM A COMPARABLE EARNINGS**

16   **ANALYSIS IN ORDER TO ARRIVE AT THEIR RECOMMENDATION?**

17   A.   No, they did not.

18   **Q. WHAT DO YOU CONCLUDE FROM THE RATE OF RETURN**

19   **RECOMMENDATION OF THE NYPA PANEL?**

20   A. In view of the extremely limited nature of the evidence presented by the NYPA panel

21   on the ROE issue, the Commission should ignore their recommendation. In addition, as

22   indicated above regarding the testimony of witnesses Liberty & Radigan, I do note that

1   the NYPA Panel testimony further undercuts the reasonableness of the Staff and CPB

2   ROE recommendations.

3   **Q. DOES THIS COMPLETE YOUR REBUTTAL TESTIMONY?**

4   A. Yes, it does.