

**Case 07-E-0949**  
**Exhibit \_\_\_(FP-1)**

**State of New York  
Department of Public Service**

**Orange & Rockland Utilities, Inc.  
Case No. 07-E-0949**

**Information/Document Request**

Request No.: DPS-87  
Requested By: Michael J. Augstell (518) 486-2874  
Date of Request: 11/01/07  
Reply Date: 11/11/07  
Witness: Roger A. Morin  
Subject: DCF Methodology

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On page 8, line 8 through line 11, of his testimony, Dr. Morin states that it is the cost of capital for O&R's electric utility business that must be determined and not the cost of capital of the consolidated parent company.

- (1) In his DCF methodology, does Dr. Morin use the parent company or the utility subsidiaries in his proxy groups?
- (2) Provide the current bond ratings and Standard & Poor's business profile scores for the companies used in Dr. Morin's proxy groups.
- (3) On average, are the bond ratings of the companies used in Dr. Morin's proxy groups higher or lower than Orange & Rockland's bond rating?
- (4) On average, are the business profile scores for the companies used in Dr. Morin's proxy groups higher or lower than Orange & Rockland's business profile score?
- (5) What percentage of the companies in Dr. Morin's proxy groups own electric production assets?
- (6) Does Dr. Morin view electric production assets as riskier than electric distribution assets?
- (7) For Dr. Morin's proxy groups, what percentage, on average, of revenues are derived from non-utility businesses?
- (8) Does Dr. Morin view non-utility business risk as higher or lower than Orange & Rockland's electric division's business risk?

- (9) In Dr. Morin's view, are the risks of the parent companies in Dr. Morin's proxy groups equal to, less than, or greater than the risks of Orange & Rockland's electric utility business? Explain.

**RESPONSE:**

- 1) Dr. Morin's testimony calculates the cost of equity for the operating companies using the market data of the consolidated parent companies as a proxy. This technique is required because the operating companies do not have publicly traded common stocks.
- 2) See attached extract from AUS Utility Reports November 2007 edition and S&P Report for the business profile scores.
- 3) See AUS Utility Reports November 2007 edition attached in response to 2). The sample was carefully constructed so as to include the parent companies of utilities designated as investment-grade and as "distribution" utilities by S&P and further censored to include only those utilities with at least 50% of their revenues from utility operations.
- 4) See attached extract from S&P Report for the business profile scores attached in response to 2). Dr. Morin notes that S&P Business Risk scores only measure the business risk component of total investment risk and excludes financial risk. Moreover, business risk score examines risk from a bondholder viewpoint rather than from a shareholder viewpoint. The former is concerned mainly with ability to service debt and creditworthiness while the latter is concerned with variability and uncertainty of return.
- 5) Dr. Morin does not have access to that information. However, Dr. Morin does have the percentage of revenues from regulated electric operations for these companies. See attached AUS Utility Reports November 2007 edition
- 6) All else remaining constant (capital structure, size, regulatory risk, etc.), T&D operations are less risky than power generation. Dr. Morin notes that an electric utility with provider of last resort responsibility (POLR) can face a host of unique circumstances, ranging from a potential market redesign, customer base uncertainty, and supply uncertainty. All of these factors must be viewed against a recent backdrop of unprecedented electricity, gas, and emissions credit price volatility. Electric utilities with POLR responsibilities and without risk-mitigating policies are at least as risky as the typical vertically integrated electric utility and warrant similar returns and capital structures.

Power generation activities are generally riskier than distribution operations, although there are exceptions. For example, distribution utilities with provider of last resort obligations in jurisdictions with retail choice, and/or distribution utilities located in high regulatory risk jurisdictions, and/or small-capitalization utilities, and/or utilities with weak balance sheets.

- 7) See answer to 5)

- 8) Generally higher.
- 9) On the whole, they are comparable in risk.

The use of parent company data to determine a utility subsidiary's cost of equity assumes that the subsidiary's risk and therefore its cost of equity is not substantially different from that of the parent company. Is the subsidiary's cost of common equity likely to change materially if it was not part of the parent company system? One can argue that as a large multi-unit company, the parent company enjoys greater diversification than its individual operating subsidiaries. In effect, risks are pooled, so the risk of the whole is less than the sum of the risks of the parts because of diversification. Moreover, holding companies may be able to operate on a more cost-effective basis by shifting energy resources in line with the relative supply-demand situation of the geographic areas of operation.

If the risk of all the subsidiaries in the consolidated parent company system are the same, the assumption that a given subsidiary's risk, and therefore its cost of equity, is similar to that of the consolidated parent is viable.

The parent company can be seen as a portfolio of companies, including both regulated companies and unregulated companies. From a conceptual viewpoint, on a stand-alone basis, the regulated companies are probably slightly less risky than the unregulated portions of the portfolio. But as a practical matter, if the regulated operations of the parent constitute the vast majority of the parent's activities and value, there is little distinction to be made between the subsidiary and the parent. If the risk-return properties of the parent portfolio are dominated by the risk-return properties of the regulated operations component, it is appropriate to assume that the parent derives its revenues predominantly from its regulated business, and is perceived by investors as a utility company.

As an additional practical matter, to the extent that equity investors in parent company stock are less than perfectly diversified, the parent's diversification activities actually reduce investor risk. Financial theory clearly states that portfolio diversification reduces risk for a given return if the components of the portfolio are less than perfectly correlated. As an added practical matter, the diversification activities of the parent may further reduce the utility's risk through a co-insurance effect stemming from its subsidiary activities. In short, if there is no quantifiable significant risk differential between the utility subsidiary and the parent, then their respective costs of debt and equity capital are virtually indistinguishable from one another. To the extent that the aforementioned co-insurance effect exists, and to the extent that corporate diversification benefits investors rather than homemade individual diversification, ratepayers benefit from a parent company's diversification efforts.

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November 2007

COMPOSITE INDEX

ELECTRIC COMPANIES

YEAR	DIVIDEND YIELD	EARNINGS MULTIPLE	PRICE
1997	6.1	13.3	
1998	4.8	16.6	
1999	4.8	15.2	
2000	5.4	13.6	
2001	4.5	14.0	
2002	5.0	14.8	
2003	5.0	15.4	
2004	4.4	18.4	
2005	4.1	20.9	
2006	3.8	20.8	
2007	3.4	18.6	
YEAR TO DATE			
DECEMBER 2006	3.4	20.0	
JANUARY 2007	3.3	18.8	
FEBRUARY 2007	3.4	18.7	
MARCH 2007	3.3	19.5	
APRIL 2007	3.4	19.0	
MAY 2007	3.2	19.9	
JUNE 2007	3.2	20.7	
JULY 2007	3.5	18.9	
AUGUST 2007	3.4	18.7	
SEPTEMBER 2007	3.4	16.0	
OCTOBER 2007	3.5	17.1	
NOVEMBER 2007	3.5	16.8	

NATURAL GAS DISTRIBUTION COMPANIES

YEAR	DIVIDEND YIELD	EARNINGS MULTIPLE	PRICE
1997	4.7	15.2	
1998	4.3	17.9	
1999	4.4	19.5	
2000	4.3	19.0	
2001	4.1	16.6	
2002	4.3	17.3	
2003	4.0	16.2	
2004	3.3	17.0	
2005	3.1	19.8	
2006	3.1	17.2	
2007	2.9	19.6	
YEAR TO DATE			
DECEMBER 2006	2.9	19.4	
JANUARY 2007	2.9	19.2	
FEBRUARY 2007	3.0	19.2	
MARCH 2007	2.9	19.9	
APRIL 2007	2.9	19.8	
MAY 2007	2.8	21.2	
JUNE 2007	2.7	21.2	
JULY 2007	2.7	21.1	
AUGUST 2007	2.8	20.1	
SEPTEMBER 2007	2.9	17.9	
OCTOBER 2007	2.9	17.7	
NOVEMBER 2007	2.9	18.3	

TELEPHONE COMPANIES

YEAR	DIVIDEND YIELD	EARNINGS MULTIPLE	PRICE
1997	3.0	17.6	
1998	2.0	24.4	
1999	1.5	28.2	
2000	0.9	27.9	
2001	0.9	26.3	
2002	1.4	21.1	
2003	1.7	21.6	
2004	2.3	21.5	
2005	2.6	22.5	
2006	2.6	21.1	
2007	2.7	20.4	
YEAR TO DATE			
DECEMBER 2006	2.4	19.6	
JANUARY 2007	2.4	19.1	
FEBRUARY 2007	2.6	17.6	
MARCH 2007	2.5	18.2	
APRIL 2007	3.1	19.0	
MAY 2007	2.7	21.7	
JUNE 2007	2.7	20.6	
JULY 2007	2.6	20.6	
AUGUST 2007	2.7	20.7	
SEPTEMBER 2007	2.9	22.4	
OCTOBER 2007	2.9	22.0	
NOVEMBER 2007	2.8	22.3	

COMBINATION GAS & ELECTRIC COMPANIES

YEAR	DIVIDEND YIELD	EARNINGS MULTIPLE	PRICE
1997	6.0	13.6	
1998	4.8	16.7	
1999	4.7	16.0	
2000	5.0	16.1	
2001	4.1	15.3	
2002	4.9	14.9	
2003	3.8	15.3	
2004	3.4	17.1	
2005	3.3	18.9	
2006	3.2	18.7	
2007	3.3	18.3	
YEAR TO DATE			
DECEMBER 2006	3.2	18.7	
JANUARY 2007	3.2	18.8	
FEBRUARY 2007	3.3	18.8	
MARCH 2007	3.2	19.8	
APRIL 2007	3.3	18.6	
MAY 2007	3.1	19.8	
JUNE 2007	3.1	19.5	
JULY 2007	3.3	19.0	
AUGUST 2007	3.4	17.5	
SEPTEMBER 2007	3.5	16.5	
OCTOBER 2007	3.6	16.6	
NOVEMBER 2007	3.5	16.9	

SMALL TELEPHONE COMPANIES

YEAR	DIVIDEND YIELD	EARNINGS MULTIPLE	PRICE
1997	NA	NA	
1998	NA	NA	
1999	NA	NA	
2000	2.4	24.4	
2001	2.8	20.0	
2002	2.6	20.1	
2003	2.8	21.7	
2004	2.6	19.3	
2005	3.5	17.2	
2006	3.8	21.6	
2007	4.4	20.8	
YEAR TO DATE			
DECEMBER 2006	3.8	21.6	
JANUARY 2007	3.8	22.2	
FEBRUARY 2007	4.3	21.9	
MARCH 2007	4.3	22.0	
APRIL 2007	4.4	20.9	
MAY 2007	4.4	23.7	
JUNE 2007	4.7	24.9	
JULY 2007	4.2	21.2	
AUGUST 2007	4.2	21.2	
SEPTEMBER 2007	4.4	19.0	
OCTOBER 2007	4.6	14.6	
NOVEMBER 2007	4.9	17.0	

WATER COMPANIES

YEAR	DIVIDEND YIELD	EARNINGS MULTIPLE	PRICE
1997	5.2	15.1	
1998	4.4	17.2	
1999	3.7	19.7	
2000	3.5	21.4	
2001	3.4	21.4	
2002	3.1	22.2	
2003	3.2	23.2	
2004	3.1	27.9	
2005	2.8	28.7	
2006	2.8	30.9	
2007	2.8	28.0	
YEAR TO DATE			
DECEMBER 2006	2.8	33.0	
JANUARY 2007	2.9	27.0	
FEBRUARY 2007	2.9	26.8	
MARCH 2007	2.8	27.6	
APRIL 2007	2.9	25.5	
MAY 2007	2.8	26.4	
JUNE 2007	2.9	27.0	
JULY 2007	2.9	26.6	
AUGUST 2007	2.8	32.0	
SEPTEMBER 2007	2.8	29.4	
OCTOBER 2007	2.7	30.1	
NOVEMBER 2007	2.9	30.1	

**State of New York  
Department of Public Service**

**Orange & Rockland Utilities, Inc.  
Case No. 07-E-0949**

**Information/Document Request**

Request No.: DPS-97  
Requested By: Michael J. Augstell (518) 486-2874  
Date of Request: 11/01/07  
Reply Date: 11/11/07  
Witness: Roger A. Morin  
Subject: Cost of Equity Methodology

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- (1) For the CAPM and the Empirical CAPM risk premium analyses Dr. Morin performed, did he consider historical studies of long-term risk premiums other than the Ibbotson Associates study, Stocks, Bonds, Bills and Inflation: Valuation Edition, 2007 Yearbook? If so, which ones?
- (2) For the CAPM and the Empirical CAPM risk premium analyses Dr. Morin performed, did he consider forward looking studies of long-term risk premiums other than that calculated by using Value Line's VLIA software or the research by Harris, Marston, Mishra and O'Brien? If so, which ones?

**Response:**

- 1) Yes. In the latest edition of Ibbotson Associates' (now Morningstar) widely-used Valuation Yearbook, 2007 edition, Ibbotson and Chen have updated their study of the prospective MRP and conclude:

*“Contrary to several recent studies on equity risk premium that declare the forward-looking equity risk premium to be close to zero, or even negative, Ibbotson and Chen have found the long-term supply of equity risk premium to be only slightly lower than the straight historical estimate.”*

In other words, prospective estimates of the MRP are virtually the same as the historical MRP.

Professor Siegel<sup>1</sup> from the Wharton School of Finance has also examined historical data over even longer time series, including data prior to 1926, some dating back to 1802. An obvious question is whether data on capital market behavior from the 19<sup>th</sup> century relevant for estimating return in the 21<sup>st</sup> century. The major concern with the Siegel data for a period beginning in 1802 is the reliability of the data. The stock market of the early 1800's was severely limited, embryonic in scope, with very few issues trading, and few industries represented. Dividend data were unavailable over most of this early period and stock prices were based on wide bid-ask spreads rather than on actual transaction prices. The difficulties inherent in stock market data prior to the Great Depression are discussed by Schwert.<sup>2</sup>

Published work by Dimson, Marsh, and Staunton<sup>3</sup> report historical returns over the period 1900 to 2000 for twelve countries, representing 90% of today's world market capitalization. They report an average risk premium over long bond returns over all countries of 5.6%, with the U.S. at 7.0%. The premium was generally higher for the second half century than for the first. For example, the U.S. had 5% in the first half, compared to 7.5% in the second half.

- 2) Dr. Morin is well aware of the state of research on the market risk premium (MRP). The academic research on the MRP is vast and often contradictory.

Dr. Morin's estimate of the prospective MRP is quite consistent with the gist of the literature on the subject. Chapter 5 of Dr. Morin's book The New Regulatory Finance provides a comprehensive summary of that literature. To highlight some of the more salient passages, Ibbotson's (now Morningstar) *Stocks, Bonds, Bills, and Inflation 2007 Yearbook* finds that a broad market sample of U.S. common stocks outperformed long-term U.S. government bonds by 6.5 percent. The historical MRP over the income component of long-term Treasury bonds rather than over the total return is 7.1 percent. It has been common practice to assume that this historical result provides an adequate basis for the expected MRP.

In their widely-used textbook, Brealey, Myers, and Allen state: "We have no official position on the exact market risk premium, but we believe a range of 6 to 8 percent is reasonable for the United States."<sup>4</sup>

Published work by Dimson, Marsh, and Staunton<sup>5</sup> reports returns over the period 1900 to 2000 for twelve countries, representing 90% of today's world market capitalization.

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<sup>1</sup> Siegel, Jeremy (1999) "The shrinking equity premium." Journal of Portfolio Management 26(1): 10-17.

<sup>2</sup> Schwert, G. W., "Indexes of U.S. Stock Prices from 1802 to 1987," Journal of Business, 1990, Vol. 63, no. 3.

<sup>3</sup> Dimson, Elroy, Paul Marsh and Mike Staunton (2000) "Risk and Return in the 20<sup>th</sup> and 21<sup>st</sup> centuries." Business Strategy Review 11(2): 1-18.

<sup>4</sup> Brealey, R., Myers, S., and Allen, P., *Principles of Corporate Finance*, 8th ed. New York: McGraw-Hill, 2006.

They report an average risk premium over long bond returns over all countries of 5.6 percent, with the United States at 7.0 percent. The premium was generally higher for the second half century than for the first. For example, the U.S. had 5 percent in the first half, compared to 7.5 percent in the second half.

A second approach to estimating the MRP is prospective in nature and consists of applying the DCF model to an aggregate equity index, as Dr. Morin did in his direct testimony.

A prospective study cited in direct testimony and published in *Financial Management* by Harris, Marston, Mishra, and O'Brien ("HMMO") provides estimates of the ex ante expected returns for S&P 500 companies over the period 1983-1998.<sup>6</sup> From that study, the average MRP estimate for the overall period is 7.2 percent.

In terms of the most recent credible research on the issue, in the latest edition of Ibbotson Associates' (now Morningstar) widely-used Valuation Yearbook, 2007 edition, Ibbotson and Chen have updated their study of the prospective MRP and conclude:

*"Contrary to several recent studies on equity risk premium that declare the forward-looking equity risk premium to be close to zero, or even negative, Ibbotson and Chen have found the long-term supply of equity risk premium to be only slightly lower than the straight historical estimate."*

In other words, prospective estimates of the MRP are comparable to historical estimates.

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<sup>5</sup> Dimson, Elroy, Paul Marsh and Mike Staunton (2000) "Risk and Return in the 20<sup>th</sup> and 21<sup>st</sup> centuries." *Business Strategy Review* 11(2): 1-18.

<sup>6</sup> Harris, R. S., Marston, F. C., Mishra, D. R., and O'Brien, King, 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.