Q. Evidence of Ms. McShane, Two factor model, Pages 60-67: Please confirm that what she refers to as "raw" betas are the actual beta estimates and that the Blume adjustment model (fn 84) was developed for all stocks not utilities. Please indicate if she us aware of any studies that have explicitly looked at the behaviour of utility betas.

A. It is confirmed that "raw" betas are the unadjusted beta estimates. It is also confirmed that the Blume adjustment model was developed for all stocks.

The only utility-specific analysis that Ms. McShane is aware of was a study by Michael J. Gombola and Douglas R. Kahl, Time-Series Processes of Utility Betas: Implications for Forecasting Systematic Risk, *Financial Management*, Autumn 1990. The study, which analyzed U.S. utility betas, showed, for the period studied, mean reversion, but suggested that the "raw" (ordinary least squares regression) betas should be adjusted toward a mean lower than the market mean of 1.0, e.g., 0.70, and the adjustment rate should be higher than the Blume rate of adjustment (0.35). Ms. McShane's adjustment was not made simply for the purpose of predicting the future "raw" (OLS regression) beta. Ms. McShane's adjustment, while consistent with the Blume adjustment, is made for purposes of more accurately estimating the expected return. The adjustment is applied in recognition that the raw beta for utilities does not accurately reflect the empirical risk/return relationship.

Recent decisions have also accepted the use of an adjusted beta. The BCUC stated in its December 2009 cost of capital decision for the Terasen Utilities (now the FortisBC Energy Utilities): "The fact that the calculated beta for PNG (considered by Dr. Booth to be the most risky utility in Canada) was 0.26 in 2008 causes the Commission Panel to consider that betas conventionally calculated with reference to the S&P/TSX are distorted and require adjustment." (page 45) Further, the Board supported an adjustment to betas in Order No. P.U. 43 (2009), stating, "While the starting point is the historical average beta (which Ms. McShane refers to as a raw beta) the additional analysis performed by Ms. McShane provides other perspectives suggesting the historic average should be adjusted. The Board agrees with Dr. Booth that utilities are a low beta stock. However, given that betas have not recently been within historical norms and in light of the financial market conditions, the Board does not expect that the beta will be within historical averages for 2010. In this circumstance the Board relies on the evidence of Ms. McShane that there should be an upward adjustment. The Board believes that, based on the evidence, a reasonable beta for Newfoundland Power is 0.60." (page 20).