Q. Reference Evidence of Dr. Sean Cleary dated September 25, 2018

Pages 21-24: Dr. Cleary uses two measures of operating income volatility (CV (EBIT) and CV (EBIT) / Sales) to quantify Newfoundland Power's level of business risk. Have these measure ever been accepted by a regulatory board in establishing the fair ROE and capital structure for a utility? If yes, please provide references to the decisions.

A. Dr. Cleary provided the CV(EBIT) measure and two slight variations of the CV(EBIT) during the 2016 NP Rate proceedings.

In Order No. P.U. 18 (2016), the Board stated in its findings on page 19, lines 11-14:

> "The assessment of business risk is acknowledged by the experts to be primarily a qualitative judgment, although Dr. Cleary did provide a quantitative assessment of operating income volatility which, he stated, supported his qualitative assessment of a low business risk for Newfoundland Power."

While there is nothing in this statement that suggests the Board accepted this evidence, there is certainly no indication that it was rejected, since it appears to have considered it.

The Board further stated in Order No. P.U. 18 (2016) on page 19, lines 26-29:

> "The Board agrees with the opinions of Drs. Booth and Cleary that the risks associated with Muskrat Falls and the negative economic outlook have not increased Newfoundland Power's business risk from average to above average at this time, compared to other Canadian utilities."

During the 2016 Generic Cost of Capital proceedings in Alberta, the Alberta Utilities Commission (AUC) made the following statements in Decision 20622-D01-2016:

Page 99:

> "440. Dr. Cleary described business risk as some variation of factors that cause uncertainty, or volatility, in operating income. In his opinion, most experts would agree with this description. Dr. Cleary used a coefficient of variation (CV) of the EBIT/sales ratio to quantify the level of business risk of the affected utilities.
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> 441. Dr. Cleary concluded that the affected utilities have low business risk, as demonstrated by their low earnings volatility, their ability to generate high operating profit margins, and their ability to grow operating earnings. In his view, this low risk supported a 100 bps "across the board" reduction in deemed equity ratios. Dr. Cleary reached this conclusion by examining the historical allowed ROEs of the affected utilities, by calculating the CV of the EBIT/sales ratio and the CV of ROE of the affected utilities and comparing them to U.S. and other Canadian utilities; and by analyzing the median annual percentage EBIT growth of the affected utilities and comparing them to U.S. and other Canadian utilities.

442. In assessing business risk, Dr. Cleary examined the ability of the affected utilities to earn their allowed ROEs on a consistent basis from 2005-2014. The yearly figures illustrated that the affected utilities earned average and median ROEs above the allowed ROE in all years except 2005, when the average ROE was 0.18 per cent below the allowed ROE. In his submission, this consistent overearning indicated that the affected utilities operate in an environment with low overall business risk."

Page 112:

"Commission findings:

508. Dr. Cleary attempted to mathematically quantify the business risk of the affected utilities using a CV of the EBIT/sales ratio. The Commission continues to consider, as it did in the following quote from Decision 2004-052 (2004 GCOC decision), that judgement is a critical component of determining the fair return for utilities.

> "The assessment of the level of business risk of the utilities is also a subjective concept. Consequently, the Board [Alberta Energy and Utilities Board] considers that there is no single accepted mathematical way to make a determination of equity ratio based on a given level of business risk."

There is no indication in the passages above that Dr. Cleary's CV(EBIT/Sales) evidence was rejected, as the AUC did consider Dr. Cleary's quantitative evidence.

During the 2018 Generic Cost of Capital proceedings in Alberta, the Alberta Utilities Commission (AUC) made the following statements in Decision 22570-D01-2018, which suggest they did not accept his CV(EBIT/Sales) analysis:

Page 58:

"271. As discussed in Section 9.3.3, because of issues identified with Dr. Cleary's quantitative-based comparison of the business risks of the affected utilities and U.S. utilities, the Commission is not convinced that there is substantial evidence on which to exclude the use of U.S. proxy groups."

Page 131:

"646. The Commission considers that there is no single accepted mathematical way to quantify business risk, as demonstrated by the number of different quantitative analyses undertaken by the parties in this proceeding."

The fact that the AUC did not accept Dr. Cleary's CV(EBIT/Sales) analysis in 2018 does not imply it is not a valid approach. As argued by Dr. Cleary on pages 20-22 of his evidence, the CV(EBIT) is a commonly used measure of business risk in finance. Dr. Cleary used CV(EBIT/Sales)) as the primary measure when evaluating Alberta utilities to account for the high growth in EBIT displayed by those utilities over the over his sample period (2005-2014). In particular, the combined EBIT for the 11 Alberta utilities examined grew at a geometric average annual growth rate of 12.4% over that period, versus an average of 3.9% for the U.S utilities examined. These high growth rates in EBIT distort traditional measures of CV-EBIT. As noted by Dr. Cleary in his current evidence (page 22, lines 8-12):

> "This measure is preferable if there are significant differences in growth rates in EBIT across the different firms being compared. It is a valid measure of business risk, since it measures volatility in the operating profit margins for firms. It also has the advantage that, as a ratio, the expected value and past average values will often coincide since these *profitability margins often tend to gravitate to some long-term average*.

During the current proceedings, Dr. Cleary reports the CV(EBIT/Sales) but also examines the CV(EBIT) measure based on expected EBIT, since NP's average annual growth rate in EBIT of 2.5% is comparable to that displayed by the proxy group utilities examined. So both measures are valid.

Finally, the passage below from the AUC's 2018 decision clearly indicates that it accepted Dr. Cleary's similar analysis indicating "low earnings volatility" as "support for the conclusion that the affected utilities have generally low business risk." In particular, page 111 of Decision 22570-D01-2018 (red and bold added for emphasis) states:

> **"9.3.1 Overall assessment of business risk**
> 534. Dr. Cleary agreed with the favourable assessment of business risk for the affected utilities included in credit rating reports issued by DBRS and S&P. Dr. Cleary stated that regulated Alberta operating utilities possess low business risk and enjoy solid regulatory support. Dr. Cleary undertook some empirical analysis that purported to support his conclusion that the affected utilities operate in a low-risk environment that enables them to earn above their approved ROEs with very little volatility in income.
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> 535. Part of Dr. Cleary's empirical analysis examined the ability of the affected utilities to earn their approved ROE on a consistent basis from 2005 to 2016, which he described as a bottomline measure of the total risks faced by the utilities. The yearly figures illustrated that the affected utilities earned average and median ROEs above the approved ROE in all years except 2005, when the average ROE was 0.18 per cent below the approved ROE. Dr. Cleary submitted this can be considered the strongest indication that the affected utilities possess low overall risk.
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> **Commission findings**
> 536. The Commission accepts that the favourable financial performance and **low volatility of earnings** illustrated by Dr. Cleary is **support for the conclusion that the affected utilities have generally low business risk**."