1   **Q.**   **For the DCF equation on page 34 please explain how the constant growth formula**
2   **on page 34 is derived from the general formula on page 33. That is what**
3   **assumptions are required to go from the general to the specific? Is it Mr. Coyne's**
4   **judgment that the equation on page 34 is appropriate for all firms or just a subset of**
5   **firms that satisfy the mathematical assumptions for the DCF formula? Please**
6   **provide any references to graduate finance textbooks that justifies Mr. Coyne's**
7   **answer.**

8

9   A.   The assumptions of the Constant Growth DCF model are stated on page 34 of
10   Concentric's *Cost of Capital* report. They are: (1) a constant average growth rate for
11   earnings and dividends; (2) a stable dividend payout ratio; (3) a constant price-to-
12   earnings multiple; and (4) a discount rate greater than the expected growth rate.

13

14   The formula on page 34 is appropriate for firms that pay dividends and that do business
15   in stable, mature industries. This is consistent with the corporate finance textbook
16   authored by Dr. Laurence Booth and Dr. Sean Cleary, which states:

17

18   *What has to be remembered is that Professor Gordon developed this*
19   *model (the DDM) for use in public utility regulation where the allowed*
20   *ROEs should be reasonable and we do not get the problem of rapid*
21   *growth rates.*[1]

22

23   And

24

25   *Although the DDM provides a great deal of insight into factors that affect*
26   *the valuation of common shares, it is based on several assumptions that*
27   *are not met by a large number of firms, especially in Canada. In*
28   *particular, it is best suited for companies that (1) pay dividends based on*
29   *a stable dividend payout history that they want to maintain in the future;*
30   *and (2) are growing at steady and sustainable rates. As such, the DDM*
31   *works reasonably well for large corporations in mature industries with*
32   *stable profits and an established dividend policy. In Canada, the banks*
33   *and utility companies fit this profile, while in the United States, there are*
34   *numerous NYSE-listed companies of this nature.*[2]

35

36   The formula on page 34 is also appropriate to estimate the investor-required return for a
37   broad market index such as the TSX or the S&P 500, as determined by the FERC, which
38   explained its rationale at length for using a constant growth DCF analysis to calculate the
39   forward-looking market risk premium in Opinion No. 531-B. The most relevant quotes
40   from that order are included below:

41

42   *As an initial matter, we reject EMCOS's argument that the NETOs'* [New
43   England Transmission Owners'] *CAPM analysis is flawed because it used*

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[1]   Laurence Booth and W. Sean Cleary, *Introduction to Corporate Finance, 1ˢᵗ Edition* (2008), at 785.
[2]   *Ibid.*, at 269. [Emphasis added.]

1   *a DCF study to determine the market risk premium. As explained above,*
2   *using a DCF study is the standard method of calculating the market risk*
3   *premium in a forward-looking CAPM analysis. We are, therefore,*
4   *unpersuaded that the use of a DCF study renders the NETOs' CAPM*
5   *analysis deficient.* [Para 110]
6
7   *We also disagree with Petitioners' argument that the NETOs' CAPM*
8   *analysis relied on an overly optimistic growth rate input in determining*
9   *the market risk premium. The growth rate in the NETOs' CAPM analysis*
10   *is based on IBES data, which the Commission has long relied upon as a*
11   *reliable source of growth rate data.* [Para 110]
12
13   *While Petitioners' assert that the growth rate input is inflated because the*
14   *NETOs calculated it based on only those S&P 500 companies that were*
15   *paying dividends, we are not persuaded that the exclusion of those*
16   *companies not paying dividends skewed the growth rate input. As the*
17   *NETOs' witness correctly explained during the hearing, a DCF analysis*
18   *can only be conducted for companies that pay dividends.* [Para 111]
19
20   *We are also unpersuaded that the growth rate projection in the NETOs'*
21   *CAPM study was skewed by the NETOs' reliance on analysts' projections*
22   *of non-utility companies' medium-term earnings growth, or that the study*
23   *failed to consider that those analysts' estimates reflect unsustainable*
24   *short-term stock repurchase programs and are not long-term projections.*
25   *As explained above, the NETOs based their growth rate input on data*
26   *from IBES, which the Commission has found to be a reliable source of*
27   *such data.* [Para 112]
28
29   *Further, the fact that the Commission's two-step DCF methodology*
30   *incorporates a long-term growth rate does not necessitate the*
31   *incorporation of a long-term growth rate in the DCF study the NETOs used*
32   *to develop the market risk premium for their CAPM analysis.* [Para 113]
33
34   *The required return on the overall market is determined by conducting a*
35   *DCF study of "a representative market index, such as the Standard &*
36   *Poor's 500 Index."* [Para 113]
37
38   *The rationale for incorporating a long-term growth rate estimate in*
39   *conducting a two-step DCF analysis of a specific group of utilities does*
40   *not necessarily apply when conducting a DCF study of the companies in*
41   *the S&P 500. That is because the S&P 500 is regularly updated to include*
42   *only companies with high market capitalization. While an individual*
43   *company cannot be expected to sustain high short-term growth rates in*
44   *perpetuity, the same cannot be said for a stock index like the S&P 500 that*
45   *is regularly updated to contain only companies with high market*

1   *capitalization, and the record in this proceeding does not indicate that the*
2   *growth rate of the S&P 500 stock index is unsustainable.* [Para 113]