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NP-CA-004 Reference: Comments on Newfoundland Power's 2022 Capital Budget 1 Application, Elenchus Research Associates Inc., August 13, 2021, page 2 14, lines 4-6 and page 24, lines 8-10. 3 4 5 "For example, an alternative with a short service life may offer significant value in terms of future flexibility (option value) that justifies 6 a higher total cost over the service life of the longest-lived alternative." 7 8 9 and 10 "A more significant consideration when comparing a long-lived asset to 11 an alternative with a shorter life, such as the hypothetical DER project in 12 the table above, is the option value provided by the more flexible 13 14 alternative." 15 How are utilities and regulators valuing future flexibility in the 16 **QUESTION:** comparison of alternatives, and how is the "option value" of the 17 hypothetical DER project determined? Please provide examples of 18 regulatory guidance from other Canadian jurisdictions that address 19 option value. 20 21 The "hypothetical DER project" referred to in the quotation is the 22 **RESPONSE:** illustrative example included in the Elenchus Report. A hypothetical option 23 value could be calculated by comparing the NPV of the two DER scenario 24 options (one with sequential projects required versus one with the second 25 of the two sequential projects not required) and then calculating the option 26 value as the difference between the two scenarios multiplied by the 27 estimated probability that the second of the two projects will not be required 28 as a result of industry evolution / disruption. 29 30 As far as Elenchus is aware, Canadian electric utilities and regulators have 31 not yet adopted the standard practice of non-regulated corporations 32 pursuing profitable projects to use their best estimate of the economic life 33 of potential asset investments rather than physical lives that they consider 34 unrealistic. For a shareholder-owned company to justify an investment. in 35 an asset based on a physical life that exceeds the expected economic life of 36 the asset would violate management's fiduciary duty to its shareholders. 37 38 Enlightened electric utilities appear to be pursing the modernization of 39 regulatory guidance through policy processes rather than through 40 introducing changes to long-standing practices on a case-by-case basis. 41 42 Australia's Regulatory Investment test, as mandated by its National 43 Electricity Rules, requires investment proponents to consider option value

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in its cost-benefit analyses.⁷ Option value is considered by performing a scenario analysis that compares inflexible long-term investments against flexible investments in which decisions are made at some point in the future based on the scenario (i.e., low demand vs. high demand).⁸

⁷ National Electricity Rules, clause 5.17.1(c)(4)(vi).

An illustrative example is provided as Example 30 in the Australian Energy Regulator's <u>Regulatory investment test for distribution</u> (page 84 to 89).