NP-CA-005 **Reference: *Comments on Newfoundland Power's 2022 Capital Budget Application*, Elenchus Research Associates Inc., August 13, 2021, page 17, lines 22-25.**

"In order to manage long term risk, the economic analysis of alternatives could include scenario analysis that examines the implications of a reasonable range of different assumptions regarding costs trends and the economic (as opposed to physical) life of the alternative assets being evaluated."

QUESTION: **How would the economic life of an asset be determined? Please provide examples of regulatory guidance from other Canadian jurisdictions that address economic life determination.**

Response: The economic life of an asset is the expected number of years that it is likely to be used and useful. Just as the actual physical life of any asset cannot be known with certainty and must be estimated, so too must the economic life be estimated. Estimating the economic life of an investment is standard practice for non-regulated corporations. For example, most technology purchases require an assessment of the period of time before it will be economic to replace an asset because it is obsolete although still operational. For example, computer hardware and software are frequently replaced due to obsolescence.

Many explanations can be found on the web. For example, CFI, a provider of online courses and certifications has an explanation that includes the following summary:

Summary

- *Economic life is the length of time an asset is expected to be useful to the owner.*
- *Assumptions when calculating economic life are that the asset will be operated at a normal level of usage and with preventative maintenance.*
- *Economic life can be reduced or ended by asset wear and damage, asset obsolescence, and changes in business operations.*

Some of the projects included in NP 2022 CBA are likely to have economic lives that are shorter than the physical life of the assets due to economic obsolescence rather than imminent physical failure. These include:

- Substation Modernization,
- Distribution Reliability Initiative,
- St. John's Teleprotection System Replacement, and

- Workforce Management System Replacement.

There are many possible estimation methods including the assessment of technological trends and other forms of expert opinion of experience. The relevant considerations in estimating an asset's economic life can be varied and can change over the life of an asset due to evolving technological options. As the above referenced CFI explanation states:

> *Asset obsolescence occurs when new innovations and technology replace current ones. It reduces economic life if it raises maintenance costs, and sometimes it ends an asset's economic life because it renders the asset's performance inefficient compared to current alternatives.*
>
> *For example, the widespread use of email replaced faxing and ended the economic life of many fax machines. Lastly, changes in business operations or business models reduce economic life if it affects the value certain assets can deliver to a business.*

Assigning an economic life to an asset is basically a matter of exercising informed judgement. This will involve updating the expected economic life based on new information, just as the expected physical life (and hence traditional depreciation rates) are updated based on the best information currently available. In the context of a review of NP's 2022 Capital Budget Application, the implication is that the economic analysis used to support capital investments should be based on credible expectations.