Q. Reference: Newfoundland Power's 2027 Capital Budget Application, 2027 Substation Refurbishment and Modernization Appendix C - Mobile Plant Substation Refurbishment and Modernization

a) Explain why the Mobile Plant Substation Refurbishment and Modernization work was not presented together with the 2026 CBA MOP-T1 replacement project.

b) Explain why transformer replacements and associated Substation Refurbishments are not treated as a cluster of related projects for the purpose of providing a consolidated scope, cost, justification, alternatives analysis, and customer-impact assessment.

A. a) The approved *MOP-T1 Power Transformer Replacement* project and the proposed *Mobile Plant Substation Refurbishment and Modernization* project are complementary capital projects with distinct engineering scopes and objectives. The primary objective of the *MOP-T1 Power Transformer Replacement* project was to replace the deteriorated Mobile Plant power transformer MOP-T1 to maintain the reliable operation of the Plant. Due to the persistently long lead time of power transformer delivery, this project needed to be included in Newfoundland Power's *2026 Capital Budget Application* to allow for timely procurement of the replacement transformer while the design requirements of the *Mobile Plant Substation Refurbishment and Modernization* project were still being developed. Due to engineering resource constraints, the specific scope for substation infrastructure modifications was not ready for inclusion in the *2026 Capital Budget Application* and was delayed to the following year.

The lifecycle analysis supporting the *MOP-T1 Power Transformer Replacement* project recognized the broader capital investment required to support the continued operation of the Mobile Plant and incorporated the estimate for the proposed *Mobile Plant Substation Refurbishment and Modernization* project. The lifecycle cost analysis was revisited as part of the proposed 2027 capital project, and it was determined that the Mobile Plant remains economically viable.[1]

b) Newfoundland Power develops capital projects based on the condition of the assets requiring replacement or refurbishment and the engineering scope necessary to address those assets. Where practical, related work is coordinated to improve project efficiency, reduce customer impacts and minimize lifecycle costs. However, depending on the condition of the assets, engineering scope, procurement requirements, project timing and regulatory approval requirements, related work may be advanced either as a single coordinated project or as complementary project with distinct scopes and implementation objectives.

[1] See the *2027 Capital Budget Application*, report *2.1 Substation Refurbishment and Modernization*, Appendix C, page C-6.

Power transformers and substation refurbishments have been separated primarily due to procurement lead times and project planning timelines. Power transformer procurement requires a four-year planning cycle to account for the capital budget application process, and delivery estimates range from 24 to 36 months. In most cases, the project scopes and estimates for power transformer replacements are less complex compared to substation refurbishment and modernization projects. Therefore, Newfoundland Power has taken the approach of submitting these applications independently to accommodate the long lead times of this equipment. Typically, the scope of these projects includes all items necessary for the installation of a new power transformer as a direct replacement to an existing transformer, so that it is not dependent on the approval of a separate substation refurbishment and modernization project.[2]

Substation refurbishment projects operate on a three-year planning cycle for inclusion in capital budget applications, as they are two-year projects. These projects require extensive preliminary work to be completed before developing a detailed engineering design, scope and estimate. Preliminary work can include, but is not limited to, land ownership inquiries, soil testing, environmental reviews, and testing and assessments of existing equipment. Due to engineering resource constraints, design of these projects has typically not progressed far enough to be coupled with power transformer scopes. Extending substation refurbishment projects to three-year projects to align with transformer delivery times would introduce further uncertainty into the estimates, as they are largely reliant on the previous year's contractor and material costs.

[2] The *MOP-T1 Power Transformer Replacement Project* is dependent on the *Mobile Plant Substation Refurbishment and Modernization* project as the existing MOP-T1 power transformer includes design characteristics that significantly differ from those of typical modern transformer designs and the surrounding substation structures that were constructed around the existing transformer installation. As a result, a replacement transformer would need to conform to the existing spatial and structural constraints, requiring a custom design to fit within the existing available footprint.