Q. (Reference report 2.2, Appendices A to D; CA-NP-044(d)-(h); NLH-NP-003; NLH-NP-012; PUB-NP-002) Spare transformers may serve LAU-T1, HAR-T1 and RRD-T3 temporarily; LBK-T1 would rely on portable P1.

a) For each unit, file the analysis comparing monitoring, repair, replacement, a spare and a portable. Provide cost, outage, expected life, and NPV, or identify the evidence used where no quantitative comparison exists.

b) Explain why an emergency arrangement acceptable for HAR-T1 cannot bridge LBK-T1 to a later date, addressing technical limits, duration, opportunity cost and reliability.

c) For an LBK-T1 failure before replacement, quantify cases where P1 is: (i) available throughout; (ii) later released; and (iii) unavailable. Show duration, outage days, lost MWh, replacement cost and customer interruption.

A. a) See Newfoundland Power's *2027 Capital Budget Application*, report *2.2 Substation Power Transformer Strategy*. The requested information is contained in section 4.0 of each of Appendices A, B, C, and D, where Newfoundland Power identifies and assesses viable alternatives to address the deteriorating condition of the above-referenced transformers.

b) LBK-T1 and HAR-T1 are not interchangeable units. They have different applications requiring them to operate at different voltages and have different low voltage winding configurations. The specifications of HAR-T1 are such that it can be backed up by portable substations P3, P4 and P5, as well as spare power transformers 200220 and 200385. LBK-T1 is capable of being backed up by portable substation P1 only. The availability of emergency response resources for HAR-T1 does not affect the need to replace LBK-T1 because the transformers serve two completely separate functions and present different operational risks.

c) Newfoundland Power has not completed the analysis requested. To complete the requested analysis, Newfoundland Power would need to make numerous assumptions regarding the timing and nature of a hypothetical LBK-T1 failure, the availability and duration of deployment of portable substation P1, hydrological conditions, generation requirements at the Lookout Brook Hydro Plant, repair requirements, and power transformer procurement and installation timelines at the time of the failure.

Given the number of assumptions required, the results of such an analysis would be highly speculative. Newfoundland Power's evaluation of the LBK-T1 replacement is based on the transformer's condition assessment, operating requirements, consequences of failure, assessment of viable alternatives, and the availability of emergency response resources, as described in the *Substation Power Transformer Strategy*.